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aWalther, Rev. T.	0	15	9	aWolley, Rev. H. F...	0 10 6
aWalsh, Mrs.	1	1	0	aWood, P. F., Esq.	1 1 0
aWardlaw, H. S., Esq.	0	10	6	aWood, H. K., Esq.	1 1 0
Wardlaw, H. S., Esq. (don.)..	..	0	10	6	aWoodhouse, C. A., Esq.	1 1 0
aWaterford, The Very Rev. Dean of	0	10	6	aWooler, Rev. W. G...	0 10 6
aWatson, W., Esq.	0	10	6	aWorsley, Mrs.	2 2 0
aWatson, Lieut.-Col.	1	1	0	aWray, Rev. Dr.	1 1 0
aWatson, G., Esq.	0	10	6	aWrightson, T., Esq., M.P.	1 1 0
aWatts, G. F., Esq.	1	1	0	aYoung, Miss M. C.	0 10 6
aWebster, J., Esq.	0	10	6	aYoung, W. B., Esq.	1 1 0
aWedgwood, Mrs.	2	0	0			
							<u>£428 7 9</u>

SUMMARY OF LOCAL SOCIETIES.

(Acknowledged in detail under special heading.)

	£	s.	d.
Aberdeen	8	7	0
Bath	9	19	6
Belfast	33	16	0
Bishop's Waltham	2	12	6
Bolton and Horwich	4	14	6
Bournemouth	2	12	6
Burley-in-Wharfedale.. ..	1	1	0
Burnley	1	10	6
Cambridge, Mass., U.S.A. (including proceeds of Lecture)	25	6	9
Canada	6	16	6
Chicago	2	2	0
Clifton and Bristol	5	3	0
Dublin	2	2	0
Dunfermline	4	5	0
Edinburgh	60	0	0
Carried forward	£170	8	9

LIST OF SUBSCRIPTIONS.

							£	s.	d.
Brought forward	..	..	..	..	..	..	170	8	9
Frome	..	..	..	..	..	..	6	6	0
Guernsey	..	..	..	..	..	..	1	11	6
Hitchin	..	..	..	..	..	..	6	6	0
Holland	..	..	..	..	..	..	2	2	0
Hull	..	..	..	..	..	..	2	12	6
Jerusalem	..	..	..	..	..	..	7	7	0
Ledbury	..	..	..	..	..	..	1	1	0
Lichfield	..	..	..	..	..	..	6	8	6
Londonderry	..	..	..	..	..	..	0	10	6
Manchester	..	..	..	..	..	..	11	0	6
Milton-next-Sittingbourne	..	..	..	..	..	..	1	1	0
Mountain Ash	..	..	..	..	..	..	1	11	6
New South Wales	..	..	..	..	..	..	1	1	0
New Zealand	..	..	..	..	..	..	2	2	0
Plymouth	..	..	..	..	..	..	2	12	6
Port Glasgow	..	..	..	..	..	..	2	10	6
Scarborough	..	..	..	..	..	..	1	11	6
Shrewsbury	..	..	..	..	..	..	0	10	6
Sydney, New South Wales	..	..	..	..	..	..	1	0	0
Tasmania	..	..	..	..	..	..	2	12	6
Tunbridge Wells	..	..	..	..	..	..	3	13	6
Uxbridge	..	..	..	..	..	..	1	1	0
Victoria	..	..	..	..	..	..	1	1	0
Whitby	..	..	..	..	..	..	2	0	0
Yeovil	..	..	..	..	..	..	0	10	6
							£240	13	3

LIST OF SUBSCRIPTIONS RECEIVED THROUGH THE HONORARY LOCAL SECRETARIES.

ABERDEEN LADIES' ASSOCIATION.

MISS MARY FORBES, *Hon. Sec.*

10th March.—By cash £8 7s. 6d.

							£	s.	d.
aAnderson, Mrs., Murtle Cottage	..	..	..	..	..	..	0	2	6
aBurnett, C. J., Esq., Old Aberdeen	..	..	..	..	..	..	0	10	6
aCochran, Alex., Esq., 152, Union Street	..	..	..	..	..	..	0	5	0
aCooper, Rev. James, D.D.	..	..	..	..	..	..	0	2	6
aForbes, Miss Mary, Freshfield Cottage..	..	..	..	..	..	..	0	10	0
aForbes, Mrs. Ogilvie, 49, Don Street	..	..	..	..	..	..	0	5	0
aGerard, Robert, Esq., 99, Union Street	..	..	..	..	..	..	0	10	6
aHargrave, Mrs., Edinburgh	..	..	..	..	..	..	0	10	0
aHenderson, Wm., Esq.	..	..	..	..	..	..	1	1	0
aKennedy, Rev. Prof., 37, High Street	..	..	..	..	..	..	0	10	6
aMilne, George, Esq., 18, Adelphi	..	..	..	..	..	..	0	10	6
aScott, Miss, Aberdeen	..	..	..	..	..	..	0	5	0
aStephenson, Prof., M.D., 297, Union Street	..	..	..	..	..	..	0	10	0
aStewart, Alex., Esq., M.D., Heathcot	..	..	..	..	..	..	0	10	6
aStewart, Lord Provost, of Banchory	..	..	..	..	..	..	1	0	0
aThompson, George, Esq., Aberdeen	..	..	..	..	..	..	0	10	6
aYeats, Wm., Esq., Beaconhill	..	..	..	..	..	..	1	0	0

LIST OF SUBSCRIPTIONS.

BATH.

GENERAL WARREN WALKER, *Hon. Sec.*

9th February.—By cash £9 19s. 6d.

						£	s.	d.
aAustin, Miss R. E.	..	..	..	..	..	1	1	0
aBartram, J. S., Esq.	..	..	..	..	..	1	1	0
aBrooke, Rev. Canon	..	..	..	..	..	1	1	0
aButtanshaw, Rev. J.	..	..	..	..	..	0	10	6
aChristie, Mrs. P.	..	..	..	..	..	1	1	0
aEstens, J., Esq.	..	..	..	..	..	0	10	6
aFarewell, Maj.-General W. T.	..	..	..	..	..	1	1	0
aHayes, Rev. P.	..	..	..	..	..	0	10	6
aHovenden, Mrs.	..	..	..	..	..	0	10	6
aSendall, Mrs.	..	..	..	..	..	1	1	0
aSouthcomb, Miss	..	..	..	..	..	1	1	0
aWinwood, Rev. H. H.	..	..	..	..	..	0	10	6

BISHOP'S WALTHAM.

REV. H. R. FLEMING, *Hon. Sec.*

6th March.—By Cash £2 12s. 6d.

						£	s.	d.
aBridges, Miss, Manor House	..	..	..	..	..	1	1	0
aFleming, Rev. H. R., Corhampton Vicarage	..	..	..	..	..	0	10	6
aMedlicott, Rev. W. G., Swanmore Vicarage	..	..	..	..	..	0	10	6
aPadbury, Mr. James	..	..	..	..	..	0	10	6

BOLTON AND HORWICH.

REV. S. BOND, *Hon. Sec.*

13th March.—By cash £4 14s. 6d.

						£	s.	d.
aAinsworth, Charlie, Esq., Junr., Lostock	..	..	..	..	..	0	10	6
aAtkinson, Rev. Canon, Bolton	..	..	..	..	..	0	10	6
aBond, Rev. S., Bolton	..	..	..	..	..	0	10	6
aHolmes, T., Esq., Hayward Leigh	..	..	..	..	..	0	10	6
aJudson, Rev. R. K., Bolton	..	..	..	..	..	0	10	6
aLeach, John, Esq., Levenshulme	..	..	..	..	..	1	1	0
aLoxham, Rev. T., Great Leven	..	..	..	..	..	1	1	0

LIST OF SUBSCRIPTIONS.

BELFAST.

SIR WILLIAM Q. EWART, BART., *Hon. Sec.*

				£	s.	d.
31st December.—By cash	..	..	..	30	18	0
10th March	„	..	..	2	18	0
				<hr/> £33 16 0 <hr/>		

For 1892.

	£	s.	d.
<i>a</i> Bell, Elias H., Esq., Brenthamville, Knock, Co. Down	1	0	0
<i>a</i> Burns, Sir John, Bart., Wemyss Castle, Scotland ..	1	0	0
<i>a</i> Crawford, William, Esq., Mount Randal, Malone Road	1	1	0
<i>a</i> Connor, C. C., Esq., M.P., Notting Hill House ..	1	0	0
<i>a</i> Cowan, Lady, Craigavad, Belfast	1	0	0
<i>a</i> Cuming, Professor, M.D., Wellington Place ..	1	0	0
<i>a</i> Dixon, Sir Daniel, J.P., Ballymenoch House, Holywood	1	0	0
<i>a</i> Dunleath, The Right Hon. Lord, Ballywalter Park ..	1	0	0
<i>a</i> Dunville, R. J., Esq., D.L., Redburn, Holywood ..	1	0	0
<i>a</i> Ewart, Isabella, Lady, Glenmachan	1	1	0
<i>a</i> Ewart, Sir William Q., Bart., Schomberg, Strandtown	1	0	0
<i>a</i> Ewart, Lady, Schomberg, Strandtown	1	0	0
<i>a</i> Hamilton, Rev. Thomas, D.D., President, Queen's College	0	10	6
<i>a</i> Harland, Lady, Glenfarne Hall, Enniskillen ..	1	0	0
<i>a</i> Henderson, Robert, Esq., Junior Carlton Club, London	1	0	0
<i>a</i> Jaffe, Alfred, Esq., J.P., Donegall Square South ..	1	0	0
<i>a</i> Jaffe, Otto, Esq., Donegall Square South	1	0	0
<i>a</i> Johnston, S. A., Esq., J.P., Dalriada	1	0	0
<i>a</i> Kingan, Samuel, Esq., J.P., Glenghana, Bangor, Co. Down	1	0	0
<i>a</i> Lytle, David, Esq., J.P., Victoria Street	1	0	0
<i>a</i> McBride, S., Esq., Windsor Avenue	1	0	0
<i>a</i> MacLaine, George L., Esq., Wandsworth Villas, Strandtown	1	0	0
<i>a</i> McNeile, H. H., Esq., D.L., Parkmount	1	0	0
<i>a</i> Musgrave, James, Esq., J.P., Drumglass House ..	1	0	0
<i>a</i> Pirrie, W. J., Esq., J.P., Ormiston, Strandtown ..	1	0	0
<i>a</i> Reade, R. H., Esq., J.P., Wilmont, Dunmurry ..	1	1	0
<i>a</i> Richardson Bros. and Co., Donegall Place	1	0	0
<i>a</i> Robinson, W. A., Esq., J.P., Culloden House, Craigavad	1	0	0
<i>a</i> Sinclair, Thomas, Esq., J.P., Hopefield.. ..	1	0	0
<i>a</i> Taylor, Sir David, J.P., Bertha House	1	0	0
<i>a</i> Watson, Wesley, Esq., The Moat, Strandtown ..	1	0	0
<i>a</i> Watson, Mrs., The Moat, Strandtown	0	2	6
<i>a</i> Wilson, Walter H., Esq., Stranmillis	1	0	0
<i>a</i> Workman, John, Esq., J.P., Lismore, Windsor Avenue.. ..	1	0	0
<i>a</i> Young, Right Hon. John, D.L., Galgorm Castle, Ballymena	1	0	0

LIST OF SUBSCRIPTIONS.

BOURNEMOUTH.

WM. MCGREGOR, ESQ., M.I.E.E., *Hon. Sec.*

10th February.—By cash.. .. £2 12s. 6d.									
							£	s.	d.
aPrince, Miss	..	..	..	..	..	..	1	1	0
aPrince, Thomas, Esq.	..	..	..	..	..	..	0	10	6
aScarth, J. Leveson, Esq.	..	..	..	..	..	..	1	1	0

BURLEY-IN-WHARFEDALE.

REV. R. M. WILLCOX, *Hon. Sec.*

By cash £1 1s. 0d.									
							£	s.	d.
aWillcox, Rev. R. M.	..	..	..	..	..	..	0	10	6
aWillcox, R. M., Esq.	..	..	..	..	..	..	0	10	6

BURNLEY.

ALFRED STRANGE, J.P., ESQ., *Hon. Sec.*

15th March.—By cash £1 10s. 6d.									
							£	s.	d.
aGrant, F. J., Esq., J.P.	..	..	..	..	..	..	0	10	0
aStrange, Alfred, Esq., J.P.	..	..	..	..	..	..	0	10	0
aWard, J. Langfield, Esq., M.A.	..	..	..	..	..	..	0	10	6

CANADA.

REV. COMMANDER L. G. A. ROBERTS, R.N., *Hon. Sec.*

By cash £6 16s. 6d.									
							£	s.	d.
aGreig, Wm., Esq., Montreal	..	..	..	..	..	..	0	10	6
aHoyles, Mrs.	..	..	..	..	..	..	1	1	0
aJones, E. A., Esq., Quebec	..	..	..	..	..	..	1	1	0
aMacFarlane, A. B., Esq., Montreal	..	..	..	..	..	..	1	1	0
aMacpherson, W. M., Esq., Quebec	..	..	..	..	..	..	1	1	0
aRoberts, Rev. L. G. A., R.N., Quebec	..	..	..	..	..	..	0	10	6
aRothwell, E. E., Esq., Montreal	..	..	..	..	..	..	1	1	0
aWaller, Rev. C. C., Montreal	..	..	..	..	..	..	0	10	6

LIST OF SUBSCRIPTIONS.

CAMBRIDGE, MASS., U.S.A.

REV. PROF. THEODORE F. WRIGHT, PH.D., *Hon. General Sec.,
and Lecturer to the Fund.*

				£	s.	d.
11th January.—By cash	..	..	..	5	13	3
13th February	..	..	..	8	14	6
13th March	..	..	..	10	8	6
21st	..	..	..	0	10	6
						Dollars.
aBanfield, Thos. P., Esq.	..	..	..	..	..	2.50
aBarrow, Miss H. R.	..	..	..	..	..	5.00
aBeardslee, Prof. J. W.	..	..	..	..	..	2.50
aBorden, Mrs. Jefferson	..	..	..	..	..	5.00
aCarter, Rev. James	..	..	..	..	..	2.50
aCobern, Dr. C. M.	..	..	..	..	..	5.00
aCortlandt, Mrs. Pierre Van	..	..	..	..	..	5.00
aErdman, Rev. Albert.	..	..	..	..	..	5.00
aGoodrich, Prof. F. S.	..	..	..	..	..	2.50
aHarding, Miss F. E.	..	..	..	..	..	2.50
aHerbuck, Rev. E.	..	..	..	..	..	2.50
aHolmes, Daniel, Esq.	..	..	..	..	..	5.00
aLowrey, Mrs. Rebecca	..	..	..	..	..	5.00
aMcNary, J. W., Esq.	..	..	..	..	..	5.00
aNiles, Hon. Wm.	..	..	..	..	..	5.00
aNitchie, H. E., Esq.	..	..	..	..	..	5.00
aOtts, Rev. J. M. P. (1891, 1892 and 1893)	..	..	..	..	..	15.00
aPierrepont, H. E., Esq.	..	..	..	..	..	5.00
aRamsay, D. M., Esq.	..	..	..	..	..	2.50
aSeward, Rev. S. S.	..	..	..	..	..	2.50
aSharpe, Mrs. Mary A.	..	..	..	..	..	5.00
aSturges, Edmund B., Esq.	..	..	..	..	..	25.00
aThayer, Prof. J. H., D.D.	..	..	..	..	..	5.00
aZimmerman, Rev. J.	..	..	..	..	..	2.50
Proceeds of Lectures at Waltham, Mass.	..	..	..	..	..	10.00

CHICAGO.

REV. H. B. WATERMAN, D.D., *Hon. Sec.*

6th March.—By cash	..	..	..	£2	2s.	0d.
						£ s. d.
aBliss, G. R., Esq., Chester, Pa.	..	..	..	0	10	6
aCollege Library, Chautauqua, N.Y.	..	..	..	0	10	6
aMabie, H. C., Esq., Tremont Temple	..	..	..	0	10	6
aSmith, J. A., Esq., Morgan Park, Ill.	..	..	..	0	10	6

LIST OF SUBSCRIPTIONS.

CLIFTON AND BRISTOL.

REV. CANON WALLACE, *Hon. Sec.*

23rd February.—By cash						£5	3s.	0d.	
							£	s.	d.
a	Bird, Wilberforce, Esq., Woodcote, Bristol	..	..	..	..	..	0	10	6
a	Howard, T., Esq., Weston-super-Mare	..	..	..	..	..	0	10	6
a	Lavington, Mrs., Clifton..	..	..	..	..	..	1	1	0
a	Mather, Rev. Canon, 3, Harley Place, Clifton..	..	..	..	..	..	0	5	0
a	Moor, Miss, Clifton	..	..	..	..	..	0	5	0
a	Rolls, Lord, Dunscrub, N.B.	..	..	..	..	..	1	0	0
a	Thompson, Mrs., Clifton..	..	..	..	..	..	0	5	0
a	Wallace, Rev. Canon, Clifton	..	..	..	..	..	0	10	6
a	Ware, Miss, Clifton	..	..	..	..	..	0	5	0
a	Wilkinson, Rev. J., 107, Pembroke Road, Clifton	..	..	..	..	..	0	10	6

DUBLIN.

REV. MAURICE DAY, *Hon. Sec.*

By cash	..	..	..	..	..	£2	2s.	0d.
							£	s. d.
aCarson, Rev. J.	..	..	..	..	..	..	1	1 0
aHarden, Rev. R. W.	..	..	..	..	..	..	0	10 6
aPowell, Rev. W. H.	..	..	..	..	..	..	0	10 6

DUNFERMLINE.

REV. JOHN CAMPBELL, *Hon. Sec.*

By cash	..	..	..	..	..	£4	5s.	0d.	
							£	s.	d.
aBrown, Rev. James, M.A.	..	..	..	..	..	0	10	6	
aInglis, William, Esq.	..	..	..	..	..	0	10	6	
aLandale, John, Esq.	..	..	..	..	..	1	0	0	
aMcFarlane, James, Esq.	..	..	..	..	..	0	10	0	
aMcLaren, William, Esq.	..	..	..	..	..	0	10	6	
aMitchell, Rev. H.	..	..	..	..	..	0	2	6	
aRoss, John, Esq.	..	..	..	..	..	0	10	6	
aStevenson, John, Esq.	..	..	..	..	..	0	10	6	

LIST OF SUBSCRIPTIONS.

EDINBURGH.

T. B. JOHNSTON, Esq., *Hon. Sec.*

15th March.—By cash £60 0s. 0d.

For 1892.

						£	s.	d.
<i>a</i> Adam, John S., Esq.	..	..	..	..	..	1	0	0
<i>a</i> Adam, Miss	..	..	..	..	..	0	10	0
<i>a</i> Agnew, Col.	..	..	..	..	..	1	1	0
<i>a</i> Balfour, G. H., Esq.	..	..	..	..	..	0	10	0
<i>a</i> Balfour, Thomas A. G., Esq., M.D.	..	..	..	..	..	0	5	0
<i>a</i> Balfour, Rev. Wm.	..	..	..	..	..	0	10	6
<i>a</i> Bartholomew, the late John, Esq.	..	..	..	..	..	0	10	0
<i>a</i> Baxter, Edmund, Esq.	..	..	..	..	..	1	0	0
<i>a</i> Bell, Mrs. Glassford	..	..	..	..	..	0	10	0
<i>a</i> Bonar, late Rev. Andrew..	..	..	..	..	..	0	10	0
<i>a</i> Bonar, Horatius, Esq.	..	..	..	..	..	0	10	6
<i>a</i> Bonar, Rev. H. N.	..	..	..	..	..	0	10	6
<i>a</i> Brown, George, Esq.	..	..	..	..	..	0	5	0
<i>a</i> Brown, J. T., Esq.	..	..	..	..	..	1	1	0
<i>a</i> Brown, the late Rev. Thos., D.D.	..	..	..	..	..	0	10	6
<i>a</i> Bryce, Wm., Esq., M.D.	..	..	..	..	..	0	10	6
<i>a</i> Burnley, W. F., Esq.	..	..	..	..	..	1	0	0
<i>a</i> Carr, Rev. G. B.	..	..	..	..	..	0	5	0
<i>a</i> Charteris, Rev. Prof.	..	..	..	..	..	0	10	6
<i>a</i> Dickson, D. S., Esq.	..	..	..	..	..	0	10	6
<i>a</i> Dickson, H. N., Esq.	..	..	..	..	..	0	10	6
<i>a</i> Dickson, Dr.	..	..	..	..	..	1	0	0
<i>a</i> Douglas, W. H. Brown, Esq.	..	..	..	..	..	0	10	6
<i>a</i> Drybrough, John, Esq.	..	..	..	..	..	0	10	6
<i>a</i> Duns, Prof., D.D.	..	..	..	..	..	0	10	6
<i>a</i> Edinburgh Public Library	..	..	..	..	..	1	1	0
<i>a</i> Edmond, Mrs. E.	..	..	..	..	..	0	10	0
<i>a</i> Elliot, Andrew, Esq.	..	..	..	..	..	0	10	6
<i>a</i> Ford, W. J., Esq.	..	..	..	..	..	1	1	0
<i>a</i> Forlong, General	..	..	..	..	..	0	10	0
<i>a</i> Forrester, H., Esq.	..	..	..	..	..	1	1	0
<i>a</i> Gallaway, Mrs.	..	..	..	..	..	1	1	0
<i>a</i> Gall and Inglis, Messrs.	..	..	..	..	..	0	10	0
<i>a</i> Gartshore, Miss Murray	..	..	..	..	..	0	10	6
<i>a</i> G. C. and J. C.	..	..	..	..	..	2	0	0
<i>a</i> Gibson, R., Esq.	..	..	..	..	..	1	0	0
<i>a</i> Goldie, Mrs.	..	..	..	..	..	1	0	0
<i>a</i> Gordon, Rev. Arthur	..	..	..	..	..	0	10	6
<i>a</i> Harrison, C. W. Ruston, Esq.	..	..	..	..	..	0	10	6
<i>a</i> Henderson, Miss	..	..	..	..	..	0	10	6
<i>a</i> Howden, John A., Esq.	..	..	..	..	..	1	1	0
<i>a</i> Hunter, Mrs.	..	..	..	..	..	0	2	6
<i>a</i> Inglis, Rev. Jas.	..	..	..	..	..	0	10	0
<i>a</i> Jamieson, J. A., Esq.	..	..	..	..	..	0	10	6
<i>a</i> Jeffery, D. Esq.	..	..	..	..	..	1	0	0
<i>a</i> Johnston, T. B., Esq.	..	..	..	..	..	1	1	0
<i>a</i> Kalley, Mrs.	..	..	..	..	..	0	10	0
<i>a</i> Kennedy, John, Esq.	..	..	..	..	..	1	0	0
<i>a</i> Luke, Rev. A.	..	..	..	..	..	0	10	0

LIST OF SUBSCRIPTIONS.

EDINBURGH—(continued).

	£	s.	d.
<i>a</i> Lyon, Wm., Esq.	1	1	0
<i>a</i> MacCandlish, J. M., Esq.	1	1	0
<i>a</i> MacDougall, Rev. D.	0	10	6
<i>a</i> MacDougall, Mrs.	0	10	0
<i>a</i> MacDougall, Miss	0	10	0
<i>a</i> Maelagen, Sir Douglas	1	1	0
<i>a</i> Macleaen, Norman, Esq.	0	10	6
<i>a</i> MacMicking, Miss	1	1	0
<i>a</i> Macphail, Rev. J. C.	0	10	6
<i>a</i> Melville, J. Balfour, Esq.	0	10	6
<i>a</i> Mill, Peter, Esq.	1	0	0
<i>a</i> Moir, Dr.	1	1	0
<i>a</i> Montgomery, Dean	0	5	0
<i>a</i> Nelson, Messrs. Thomas and Son	1	0	0
<i>a</i> Norrie, J. R., Esq.	0	10	6
<i>a</i> Oliver, G. E., Esq.	0	10	0
<i>a</i> Padon, Alex., Esq.	0	10	6
<i>a</i> Paterson, Miss	0	10	0
<i>a</i> Rainy, Rev. Principal	0	10	0
<i>a</i> Robertson, Wm., Esq.	0	10	6
<i>a</i> Robson, William, Esq.	0	5	0
<i>a</i> Rogerson, J. J., Esq., LL.D.	0	10	0
<i>a</i> Scott, Miss M. S.	1	0	0
<i>a</i> Scott, Bros.	0	5	0
<i>a</i> Scott, Rev. David	0	10	6
<i>a</i> Simpson, Prof.	1	1	0
<i>a</i> Simpson, Rev. David	0	10	6
<i>a</i> Skirving, A., Esq.	1	0	0
<i>a</i> Stalker, R. B., Esq.	0	10	0
<i>a</i> Stevenson, Misses	1	0	0
<i>a</i> Stewart, J. R., Esq.	0	10	0
<i>a</i> Stewart, Prof. Grainger	1	0	0
<i>a</i> Stewart, Mrs. A.	0	10	6
<i>a</i> Teape, Rev. Dr. and Mrs.	0	10	0
<i>a</i> Teape, Rev. Wm., M.A. (1891 and 1892)	1	1	0
<i>a</i> Thin, James, Esq.	0	10	6
<i>a</i> Thomson, Rev. Dr. A.	0	5	0
<i>a</i> Turner, Rev. W.	0	10	6
<i>a</i> Union Mutual Improvement Association	0	10	6
<i>a</i> Usher, Messrs. Andrew and Co.	0	10	6
<i>a</i> Watson, James, Esq.	1	1	0
<i>a</i> Watson, John, Esq.	1	1	0
<i>a</i> Whyte, Rev. Dr. Alex.	1	0	0
<i>a</i> Wilson, Rev. J. H., D.D.	0	5	0
<i>a</i> Wood, Mrs.	0	5	0
<i>a</i> Younger and Co., Messrs. Wm.	1	1	0
<i>a</i> Younger, Robert, Esq.	0	10	6

LIST OF SUBSCRIPTIONS.

FROME.

REV. R. RAIKES BROMAGE, *Hon. Sec.*

30th December.—By cash	..	..	£6	6s.	0d.			
						£	s.	d.
<i>a</i> Boodle, Rev. R. G., Cloford Vicarage	..	..	..	..	..	1	1	0
<i>a</i> Bromage, Rev. R. Raikes, Keyford Parsonage..	..	..	..	..	..	1	1	0
<i>a</i> Daniel, G. A., Esq., Nunnery Court	..	..	..	..	..	0	10	6
<i>a</i> Daniel, Rev. W. E., East Pennard	..	..	..	..	..	0	10	6
<i>a</i> Flatman, Alderman E., Esq., C.C., 53, Keyford	..	..	..	..	..	0	10	6
<i>a</i> Tanner, Joseph, Esq., J.P., 72, Pembroke Road	..	..	..	..	..	1	1	0
<i>a</i> Thompson, Miss, Knoll House	..	..	..	..	..	0	10	6
<i>a</i> Thompson, Henry, Esq., Spring Hill	..	..	..	..	..	0	10	6
<i>a</i> Wiltshire, G. W., Esq., Wilts and Dorset Bank	..	..	..	..	..	0	10	6

GUERNSEY.

JOHN WHITEHEAD, ESQ., *Hon. Sec.*

30th January.—By cash	..	..	£1	11s.	6d.			
						£	s.	d.
<i>a</i> Guille Alle's Library	..	..	..	..	..	0	10	6
<i>a</i> Whitehead, John, Esq.	..	..	..	..	..	0	10	6
Donations	..	..	..	..	..	0	10	6

HITCHIN.

J. POLLARD, ESQ., *Hon. Sec.*

21st February.—By cash	..	..	..	£6	6s.	0d.		
						£	s.	d.
<i>a</i> Bathurst, Archdeacon	..	..	..	..	..	0	10	6
<i>a</i> Gatward, J., Esq...	..	..	..	..	..	0	10	6
<i>a</i> Lucas, Miss, M.A.	..	..	..	..	..	0	10	6
<i>a</i> Pollard, J., Esq.	..	..	..	..	..	0	10	6
<i>a</i> Priest, T., Esq.	..	..	..	..	..	0	10	6
<i>a</i> Seebolm, F., Esq.	..	..	..	..	..	1	1	9
<i>a</i> Ransom, W., Esq.	..	..	..	..	..	1	1	0
<i>a</i> Smyth, Mrs.	..	..	..	..	..	0	10	6
<i>a</i> Tuke, J. H., Esq...	..	..	..	..	..	1	1	0

LIST OF SUBSCRIPTIONS.

HOLLAND.

H. J. SCHOUTEN, ESQ., *Hon. Sec.*

8th March.—By cash	..	..	..	£2	2s.	0d.			
							£	s.	d.
aBroek, Rev. J. J. van den	..	..	..	..	..	..	0	10	6
aHamburger, J., Esq.	..	..	..	..	..	..	0	10	6
aHoutsma, Prof. Dr. M. T.	..	..	..	..	..	..	0	10	6
aSchouten, Rev. L..	..	..	..	..	..	..	0	10	6

HULL.

WM. BOTTERILL, ESQ., *Hon. Sec.*

8th February.—By cash	..	..	..	£2	12s.	6d.			
							£	s.	d.
aBotterill, Wm., Esq.	..	..	..	..	..	..	0	10	6
aHolmes, T. B., Esq., J.P.	..	..	..	..	..	..	1	1	0
aHull Subscription Library	..	..	..	..	..	..	0	10	6
aSharp, J. Fox, Esq.	..	..	..	..	..	..	0	10	6

JERUSALEM.

G. ROBINSON LEES, ESQ., *Acting Hon. Sec. in absence of*
REV. THEODORE DOWLING.

							£	s.	d.
18th January.—By cash	..	..	..	..	..	..	2	12	6
21st March	..	..	..	..	..	..	4	14	6
							£	s.	d.
aArseniew, S., Esq.	..	..	..	..	..	..	0	10	6
aAttlee, Rev. Simmonds	..	..	..	..	..	..	0	10	6
aBen-Oliel, Rev. A.	..	..	..	..	..	..	0	10	6
aBiggs, Rev. Chas., M.A.	..	..	..	..	..	..	0	10	6
aBlyth, Right Rev. Bishop	..	..	..	..	..	..	0	10	6
aClark, Herbert, Esq.	..	..	..	..	..	..	0	10	6
aCook, Messrs. Thos. and Son	..	..	..	..	..	..	0	10	6
aDickson, John, Esq.	..	..	..	..	..	..	0	10	6
aGrand New Hotel, The	..	..	..	..	..	..	0	10	6
aJamal, Rev. Joseph	..	..	..	..	..	..	0	10	6
aSchor, Joseph, Esq.	..	..	..	..	..	..	0	10	6
aSejourne, Prof. Paul M. (1892-93)	..	..	..	..	..	..	1	1	0
aUngar, Edward Max, Esq.	..	..	..	..	..	..	0	10	6

LEDBURY.

REV. T. SALTER STOOKE-VAUGHAN, *Hon. Sec.*

							£	s.	d.
aCurtis, Rev. G. C., Coddington Rectory	..	..	..	..	..	..	1	1	0

LIST OF SUBSCRIPTIONS.

LICHFIELD.

H. M. MORGAN, ESQ., *Hon. Sec.*

23rd February.—By cash	..	..	£6	8s.	6d.			
						£	s.	d.
aBridgeman, Mrs.	..	..	..	..	..	0	10	0
aGraham, Rev. John	..	..	..	..	..	0	10	6
aGresley, Mrs. C.	..	..	..	..	..	0	10	0
aGulson, Miss	..	..	..	..	..	1	0	0
aHinckley, F., Esq.	..	..	..	..	..	0	10	0
aLonsdale, Mrs.	..	..	..	..	..	2	2	0
aMorgan, H. M.s Esq.	..	..	..	..	..	0	10	6
aPhillips, Mrs.	..	..	..	..	..	0	5	0
aRichardson, J. C., Esq.	0	10	6

LONDONDERRY.

ALEX. McVICKER, ESQ., *Hon. Sec.*

aMcVicker, Alex., Esq.	10s.	6d.
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MANCHESTER.

REV. W. F. BIRCH, *Hon. Sec.*

13th January.—By cash	£	s.	d.		
8th February	5	15	6		
				5	5	0		
							£	s.
								d.
aArmistead, Richard, Esq.	..	..	..	..	0	10	6	
aBarlow, J. R., Esq.	..	..	..	..	0	10	6	
aChorlton, J., Esq.	..	..	..	..	0	10	6	
aHeelis, James, Esq.	..	..	..	..	1	1	0	
aRobinson, George, Esq.	..	..	..	..	1	1	0	
aRobinson, John, Esq.	..	..	..	..	2	2	0	
aRobinson, Oswald, Esq.	..	..	..	..	1	1	0	
aRobinson, Robert, Esq.	..	..	..	..	1	1	0	
aRymer, T., Esq.	..	..	..	..	1	1	0	
aRymer, T. H., Esq.	..	..	..	..	1	1	0	
aSharp, Misses	..	..	..	..	1	1	0	

MILTON-NEXT-SITTINGBOURNE.

REV. CHAS. HARRIS, *Hon. Sec.*

13th February.—By cash	..	..	£1	1s.	0d.			
						£	s.	d.
aBunyar, Mrs. M. A., Maidstone..	..	..	..	0	10	6		
aHarris, Rev. C., Milton	..	..	..	0	10	6		

THE
PALESTINE EXPLORATION FUND.

NOTES AND NEWS.






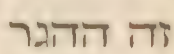
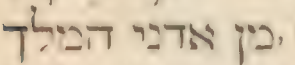
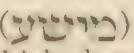
THE excavations at Tell el Hesi are being vigorously carried on by Mr. Bliss, who has recovered from his serious illness. His report of the work of the spring season is printed in the present number.

In the present number will be found an account of the railway between Jaffa and Jerusalem, contributed by Herr Baurath Schick. The course of the line will be laid down on the large and small maps of the Fund, and the sheets showing it will be ready shortly. As we are going to press, intelligence has reached us that the line has been injured by the heavy rains, and is not now in working order. Five inches of rain are said to have fallen in twenty-four hours.

We publish a short note by Herr Schick on Mr. Hanauer's paper on "The Site of Calvary" which appeared in the *Quarterly Statement* for October, 1892. An elaborate paper on the same subject by Herr Schick will appear in our next issue.

The controversy respecting the site of the Holy Sepulchre has been rekindled by a proposal to purchase the spot known as "Gordon's Tomb" (see *Quarterly Statement*, 1892, page 120), which, it is supposed by some, may have been the Tomb of Our Lord. Considerable correspondence on the subject has taken place, and some of the principal letters, together with a "Times" leader referring to it, will be found reprinted at page 90.

After two years' study of the published texts of the tablets found at Tell Amarna, Major Conder has completed a translation of them which the Committee of the Fund have undertaken to publish. In this, as in all their publications, the Committee beg it to be understood that the author alone is responsible for the opinions put forward.

Referring to a squeeze and a photograph of a "Phœnician" inscription on a plate of metal recently sent home from Palestine, Professor Sayce writes:—"The inscription is a forgery. Sidonian forms of letters of the 5th century B.C., like 4/, are mixed with Moabite forms of the 9th century B.C. A letter  which does not exist in the Phœnician alphabet occurs several times. There are also letters which have been copied from semi-obliterated texts (like  and ) , as well as forms which belong to late Aramean texts ( and ). Together with Hebrew expressions like  and , are words which do not, and could not, exist in Hebrew. In fact the inscription is untranslatable. In the centre the letters composing the name of King Mesha () have been copied from the Moabite stone, but arranged in a way which shows that the copyist did not understand what they meant. Finally, almost the only intelligible part of the inscription are the words 'This is the stone,' which are, of course, inapplicable to a metal plate."

Some stone figures said to have been found at Tiroh are also pronounced to be forgeries by the Rev. Dr. Ginsburg.

Mrs. C. Worsley writes, from Beyrout, that the Druses consider themselves descendants of the two-and-a-half tribes of Israel who settled beyond Jordan. They say they "come from Gad," which our correspondent considers to mean the Baal Gad alluded to by Major Conder in the July number of the *Quarterly Statement* for 1891.

The ceremony of turning the first sod of the Syria Ottoman Railway, connecting the port of Haifa with Damascus, took place on December 13th at the foot of Mount Carmel. Mrs. Pilling, wife of the President of the Company, performed the function, in presence of the principal Mohammedan notabilities of the district, and some 15,000 of the inhabitants. The proceedings, which passed off most successfully, and amid great enthusiasm, were followed by a grand banquet at which the principal local officials and representatives of the Ottoman Government were present.

The Rev. T. E. Dowling, of Jerusalem, writes:—"One drawback when travelling through Palestine and Syria is the imperfect and unreliable information which is obtained through the ordinary Dragoman. He is helpful in many respects, but whether he has seen a copy of the 21 sheets of the Old and New Testament map of the Palestine Exploration Fund or ever read a number of the *Quarterly Statement* is doubtful.

"You will, therefore, learn with pleasure that a second course of lectures is to be delivered in the Holy City during the coming winter, which series Dragomans are particularly invited to attend, and to take notes, and ask questions."

The series of Lectures delivered in connection with the Fund in the spring of the year, at 20, Hanover Square, are now published. Price of the volume, to Subscribers to the Fund, 2s. 6d., to others, 3s. 6d. The Lectures are also published singly, price to Subscribers, 6d., to others, 1s.

In a note on the last *Quarterly Statement* the "*Jewish Chronicle*" remarks:—"A glance at the advertisements makes one seriously regret that the fine map of Palestine published at a low price by the Exploration Society has been so little patronised by members of the Jewish community. . . . Major Conder's '*Tent work in Palestine*' would form an appropriate and acceptable gift as a prize or birthday present."

The value of the work of the Fund and its officers in elucidating the Bible histories is strikingly shown in the Rev. Charles Neil's new work "*The Teacher's Synoptical Syllabus of Scripture Lessons*," several of the maps in which are by Major Conder and by Mr. George Armstrong. The "*Names and Places in the Old and New Testament and the Apocrypha*" by Mr. Armstrong is enumerated by Mr. Neil as one of the books which were found "extremely helpful" in drawing up his valuable "syllabus."

The following may be had on application to the Assistant Secretary at the Office of the Fund, viz. :—

Casts of the Tablet with a Cuneiform Inscription found at Tell-el-Hesi, price 2s. 6d. each.

Casts of the Ancient Hebrew Weight brought by Dr. Chaplin from Samaria, price 2s. 6d. each.

Casts of an Inscribed Bead from Palestine, forwarded by Professor Wright, Cambridge, Mass., U.S.A., price 1s. each.

Photographs of Tell-el-Hesi, showing the excavations, price 1s. each.

The following gentlemen have kindly consented to act as Honorary Local Secretaries: The Rev. Robert Campbell, St. Margaret's Manse, Dunfermline, in place of the Rev. James Brown, resigned; The Rev. Robert Edmund Parr, West Hartlepool; The Rev. E. H. Cross, D.D., Belvedere, Trinity Road, Folkestone; The Rev. W. Earl, Hadly, Wellington, Salop.

The Rev. L. G. A. Roberts has been appointed Lecturer in Canada. His address is Hudson Parsonage, Province Quebec, Canada.

We are happy to state that M. Clermont-Ganneau is actively engaged on the letterpress which is to accompany the drawings of M. Lecomte, illustrating M. Ganneau's Archaeological Mission, and that considerable progress has already been made in the work.

The museum of the Fund, at 24, Hanover Square, is now open to subscribers between the hours of 10 a.m. and 5 p.m., except on Saturdays, when it closes at 2 p.m.

The Committee have to acknowledge with thanks the following donations to the Library of the Fund :—

- “The Land of Promise.” By H. Bonar, D.D. From J. A. Eastwood, Esq.
 “The Holy City, Jerusalem, its Topography, Walls, and Temples.” By S. Russell Forbes, D.D. From the Author.
 “Le Château de Banias et ses Inscriptions.” By M. Max Van Berchem. From the Author.
 “The Temple of Ezekiel’s Prophecy.” By Henry Sulley. From the Author.
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The Committee will be glad to receive donations of Books to the Library of the Fund, which already contains many works of great value relating to Palestine and other Bible Lands. A list of these will be published in the April *Quarterly Statement*.

It may be well to mention that plans and photographs alluded to in the reports from Jerusalem and elsewhere cannot all be published, but all are preserved in the offices of the Fund, where they may be seen by subscribers.

The third and revised edition of “Heth and Moab” is now ready.

A new edition of “Twenty-one Years’ Work” is in course of preparation, and will be brought down to date. The new title will be “Twenty-Seven Years’ Work.” The Index to the *Quarterly Statements* is being brought up to date.

The first volume of the “Survey of Eastern Palestine,” by Major Conder, is accompanied by a map of the portion of country surveyed, special plans, and upwards of 350 drawings of ruins, tombs, dolmens, stone circles, inscriptions, &c. The first 250 subscribers pay seven guineas for the three volumes; subscribers to the “Survey of Western Palestine” are privileged to have the volumes for this sum. The price will be raised, after 250 names are received, to twelve guineas. The Committee are pledged never to let any copies be subscribed for under the sum of seven guineas. Mr. A. P. Watt, 2, Paternoster Square, is the Sole Agent. The attention of intending subscribers is directed to the announcement in the fore part of this number.

Mr. H. Chichester Hart’s “Fauna and Flora of Sinai, Petra, and the Wady ‘Arabah” has been completed and sent out to subscribers.

The books now contained in the Society’s publications comprise an amount of information on Palestine, and on the researches conducted in the country, which can be found in no other publications. It must never be forgotten that no single traveller, however well equipped by previous knowledge, can compete with a scientific body of explorers, instructed in the periods required, and provided with all the instruments necessary for carrying out their work. The books are the following (*the whole set (1 to 15) can be obtained by subscribers*

to the Fund by application to the Head Office only (24, Hanover Square, W.), for £3 1s. 6d., carriage paid to any part in the United Kingdom only):—

By Major Conder, R.E.—

- (1) "Tent Work in Palestine."—A popular account of the Survey of Western Palestine, freely illustrated by drawings made by the author himself. This is not a dry record of the sepulchres, or a descriptive catalogue of ruins, springs, and valleys, but a continuous narrative full of observations upon the manners and customs of the people, the Biblical associations of the sites, the Holy City and its memories, and is based upon a six years' experience in the country itself. No other modern traveller has enjoyed the same advantages as Major Conder, or has used his opportunities to better purpose.
- (2) "Heth and Moab."—Under this title Major Conder provides a narrative, as bright and as full of interest as "Tent Work," of the expedition for the *Survey of Eastern Palestine*. How the party began by a flying visit to North Syria, in order to discover the Holy City—Kadesh—of the children of Heth; how they fared across the Jordan, and what discoveries they made there, will be found in this volume.
- (3) Major Conder's "Syrian Stone Lore."—This volume, the least known of Major Conder's works, is, perhaps, the most valuable. It attempts a task never before approached—the reconstruction of Palestine from its monuments. It shows what we should know of Syria if there were no Bible, and it illustrates the Bible from the monuments.
- (4) Major Conder's "Altaic Inscriptions."—This book is an attempt to read the Hittite Inscriptions. The author has seen no reason to change his views since the publication of the work.
- (5) Professor Hull's "Mount Seir."—This is a popular account of the Geological Expedition conducted by Professor Hull for the Committee of the Palestine Fund. The part which deals with the Valley of Arabah will be found entirely new and interesting.
- (6) Herr Schumacher's "Across the Jordan."
- (7) Herr Schumacher's "Jaulân."—These two books must be taken in continuation of Major Conder's works issued as instalments of the "Survey of Eastern Palestine." They are full of drawings, sketches, and plans, and contain many valuable remarks upon manners and customs.

By Walter Besant, M.A.—

- (8) "The Memoirs of Twenty-one Years' Work."—This work is a popular account of the researches conducted by the Society during the past twenty-one years of its existence. It will be found not only valuable in itself as an interesting work, but also as a book of reference, and especially useful in order to show what has been doing, and is still doing, by this Society.
- (9) Herr Schumacher's "Kh. Fahl." The ancient Pella, the first retreat of the Christians; with map and illustrations.

By George Armstrong—

- (10) *Names and Places in the Old and New Testament and Apocrypha.* This is an index to all the names and places mentioned in the Bible and New Testament, with full references and their modern identifications, as shown on the new map of Palestine.
- (11) Besant and Palmer's "History of Jerusalem."—The "History of Jerusalem," which was originally published in 1871, and has long been completely out of print, covers a period and is compiled from materials not included in any other work, though some of the contents have been plundered by later works on the same subject. It begins with the siege by Titus and continues to the fourteenth century, including the Early Christian period, the Moslem invasion, the mediæval pilgrims, the Mohammedan pilgrims, the Crusades, the Latin Kingdom, the victorious career of Saladin, the Crusade of Children, and many other little-known episodes in the history of the city and the country.
- (12) Northern 'Ajlûn "Within the Decapolis," by Herr Schumacher.

By Henry A. Harper—

- (13) "The Bible and Modern Discoveries."—This work, written by a Member of the Executive Committee of the Palestine Exploration Fund, is an endeavour to present in a simple and popular, but yet a connected form, the Biblical results of twenty-two years' work of the Palestine Exploration Fund. The writer has also availed himself of the discoveries made by the American Expeditions and the Egyptian Exploration Fund, as well as discoveries of interest made by independent travellers.

The Bible story, from the call of Abraham to the Captivity, is taken, and details given of the light thrown by modern research on the sacred annals. Eastern customs and modes of thought are explained whenever the writer thought that they illustrated the text. This plain and simple method has never before been adopted in dealing with modern discovery.

To the Clergy and Sunday School Teachers, as well as to all those who love the Bible, the writer hopes this work will prove useful. He is personally acquainted with the land; nearly all the places spoken of he has visited, and most of them he has moreover sketched or painted. It should be noted that the book is admirably adapted for the School or Village Library.

By Guy le Strange—

- (14) "Palestine under the Moslems."—For a long time it had been desired by the Committee to present to the world some of the great hoards of information about Palestine which lie buried in the Arabic texts of the Moslem geographers and travellers of the Middle Ages. Some few of the works, or parts of the works, have been already translated into Latin, French, and German. Hardly anything has been done with them in English, and no attempt has ever been made to systematise, compare, and annotate them.

This has now been done for the Society by Mr. Guy le Strange. The work is divided into chapters on Syria, Palestine, Jerusalem, and

Damascus, the provincial capitals and chief towns, and the legends related by the writers consulted. These writers begin with the ninth century and continue until the fifteenth. The volume contains maps and illustrations required for the elucidation of the text.

The Committee have great confidence that this work—so novel, so useful to students of mediæval history, and to all those interested in the continuous story of the Holy Land—will meet with the success which its learned author deserves.

By W. M. Flinders Petrie—

- (15) "Lachish" (one of the five strongholds of the Amorites).—An account of the excavations conducted by Mr. Petrie in the spring of 1890, with view of Tell, plans and sections, and upwards of 270 drawings of the objects found.

By Trelawney Saunders—

- (16) "An Introduction to the Survey of Western Palestine, describing its Waterways, Plains, and Highlands, with special reference to the Water Basin—(Map. No. 10)."

The new Map of Palestine embraces both sides of the Jordan, and extends from Baalbek in the north to Kadesh Barnea in the south. All the modern names are in black; over these are printed in red the Old Testament and Apocrypha names. The New Testament, Josephus, and Talmudic names are in blue, and the tribal possessions are tinted in colours, giving clearly all the identifications up to date. It is the most comprehensive map that has been published, and will be invaluable to universities, colleges, schools, &c.

It is published in 21 sheets, with paper cover; price to subscribers to the Fund, 24s.; to the public, £2. It can be had mounted on cloth, rollers, and varnished for hanging. The size is 8 feet by 6 feet. The cost of mounting is extra (*see Maps*).

In addition to the 21-sheet map, the Committee have issued as a separate Map the 12 sheets (*viz.*, Nos. 5-7, 9-11, 13-15, 20-22), which include the whole of Palestine as far north as Mount Hermon, and the districts beyond Jordan as far as they are surveyed. *See key-map to the sheets.*

The price of this map, in 12 sheets, in paper cover, to subscribers to the Fund, 12s. 6d.; to the public, £1 1s.

The size of the map, mounted on cloth and roller for hanging, is 4½ feet by 6¾ feet.

Any single sheet of the map can be had separately, price, to subscribers of the Fund, 1s. 6d. Mounted on cloth to fold in the pocket suitable for travelling, 2s. To the public 2s. and 2s. 6d.

A copy of names and places in the Old and New Testament, with their modern identifications and full references, can be had by subscribers with either of these maps at the reduced price of 2s. 6d.

The first and second parts, Vol. I., of "Felix Fabri," were issued to subscribers to the Pilgrim's Text Society in May and July of last year. Parts I

and II, Vol. II, of the same work are in the press. The account of "Saewulf's Pilgrimage to Jerusalem and the Holy Land" (1102 A.D.) has also been published by the same Society.

Branch Associations of the Bible Society, all Sunday School Unions within the Sunday School Institute, the Sunday School Union, and the Wesleyan Sunday School Institute, will please observe that by a special Resolution of the Committee they will henceforth be treated as subscribers and be allowed to purchase the books and maps (by application only to the Secretary) at reduced price.

We regret that, owing to Mr. George Armstrong being laid aside by a severe attack of influenza, the statement of the financial position of the Fund has to be postponed until our next issue.

Subscribers are requested to note that the following can be had by application to the office, at 1s. each:—

1. Index to the *Quarterly Statement*, 1869–1880.
 2. Cases for binding Herr Schumacher's "Jaulân."
 3. Cases for binding the *Quarterly Statement*, in green or chocolate.
 4. Cases for binding "Abila," "Pella," and "Ajlûn" in one volume.
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Early numbers of the *Quarterly Statement* are very rare. In order to make up complete sets, the Committee will be very glad to receive any of the following numbers:—

No. II, 1869; No. VII, 1870; No. III, 1871; January and April, 1872; January, 1883, and January, 1886.

It having been reported to the Committee that certain book hawkers are representing themselves as agents of the Society, the Committee have to caution subscribers and the public that they have no book hawkers in their employ, and that none of their works are sold by itinerant agents.

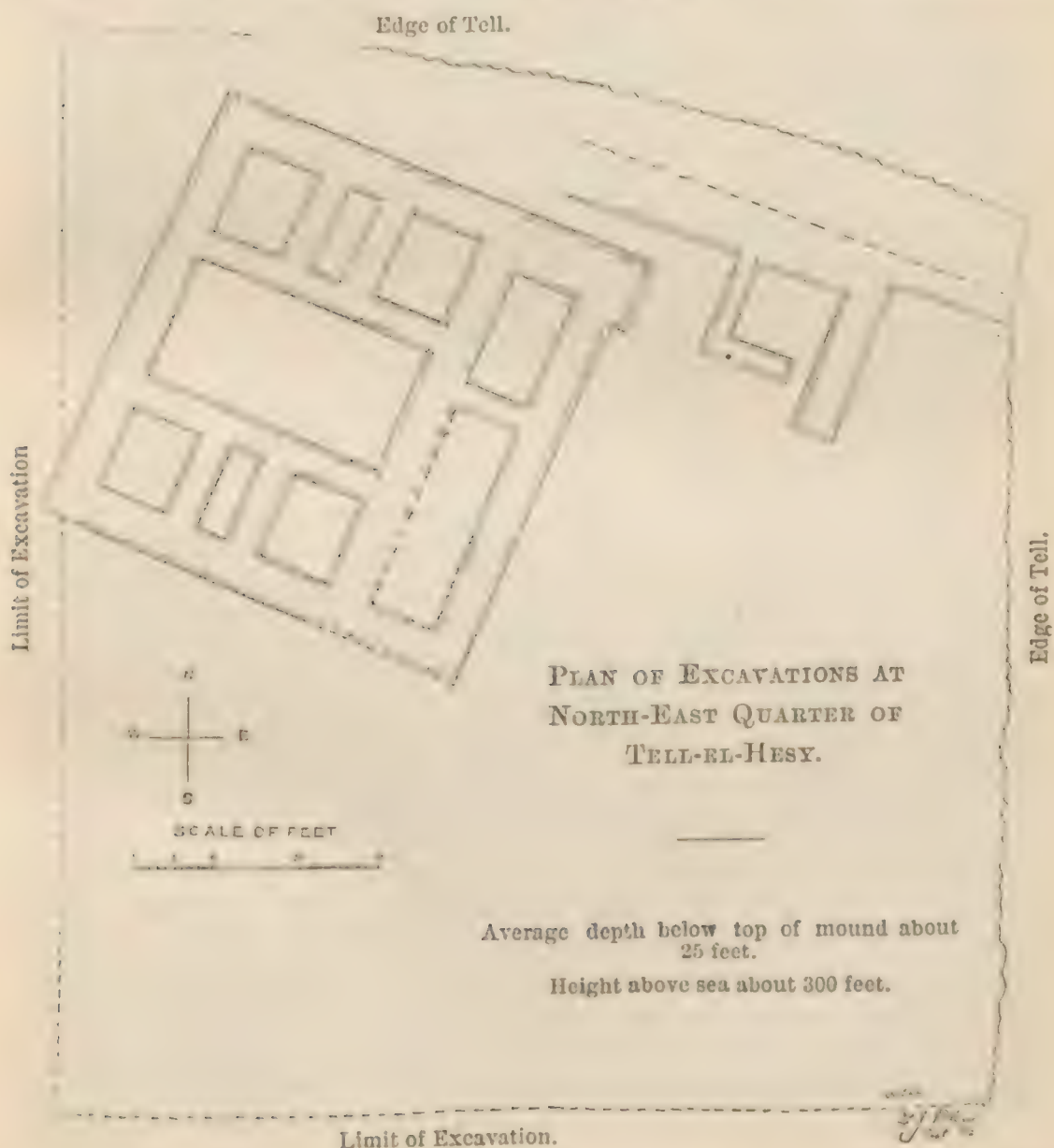
While desiring to give every publicity to proposed identifications and other theories advanced by officers of the Fund and contributors to the pages of the *Quarterly Statement*, the Committee wish it to be distinctly understood that by publishing them in the *Quarterly Statement* they neither sanction nor adopt them.

Subscribers who do not receive the *Quarterly Statement* regularly are asked to send a note to the Secretary. Great care is taken to forward each number to all who are entitled to receive it, but changes of address and other causes give rise occasionally to omissions.

REPORT OF THE EXCAVATIONS AT TELL-EL-HESY, DURING THE SPRING SEASON OF THE YEAR 1892.

By FREDERICK JONES BLISS, B.A.

THE work of lowering the north-east section of Tell-el-Hesy was resumed March 28th, and suspended May 26th, when the wheat harvest set in, rendering it impossible to procure labourers, except at extravagant rates. As far as the weather was concerned, we might, with some inconvenience



from the heat, have continued a month longer. A large part of the work consisted in removing the bed of ashes, 5 feet deep, which, according to Professor Petrie, separates the Jewish kingdom from the periods below. This

work was very tedious and expensive, but absolutely essential in order to uncover the Amorite towns. Before reaching the ashes, however, we uncovered the ruins of the large construction which I mark on the Plan as having the average level of 300 feet. The foundations are singularly irregular in level, and that estimate is too high, and should be lowered 5 feet. The first traces of this building were found in the southern rooms, which were easily cleared out, as they were filled with general *débris*. The walls were built on *débris*, but a bed of fine yellow sand, one-half an inch thick, intervened. Such sand Professor Petrie found under the door-sills of the pilaster building. I always listen to the suggestions of the workmen, believing that old traditions of building may have been handed down. They declared that the sand was to prevent the walls from settling. Without this clue of the yellow sand, it would have been very difficult to trace the walls, though not impossible, for without it we have cleared other rooms, which at first seemed one mass of indistinguishable brick, owing to the falling inward of the upper walls. As seen in the plan and photograph, the building is beautifully symmetrical, though we did not begin to guess this till the work of clearing had gone on some time. Our method is strictly inductive; we did not presuppose symmetry, and then infer connections here and there, but we followed the yellow sand clue until the building stood out as planned. Our only inferences were in the rooms to the east, where, as it happens, the symmetry is broken. It was fascinating to find the outer wall at every part measure from 5 feet 4 inches to 5 feet 8 inches in thickness, usually 5 feet 6 inches. The variation was easily explained, for the walls visibly sagged, in some places inward, in some outward. How many centuries have they borne the weight of 30 feet of Tell above them? The builders of this edifice found the ground of very irregular surface, or of varying hardness, for the line of sand marking the foundations rises and falls in the same room in a zig-zag line. We found no doors, for the building was ruined down below the surface of the surrounding ground, the highest remaining walls being hardly 3 feet high, while in some cases there remained but a single course of brick above the sand foundation. From the symmetry of the rooms, we must understand some public structure. The largest room was of considerable size, being about 30 feet by 15 feet. The two small rooms were only 11 feet by 4 feet, actually less broad than their encompassing walls. That we made no mistake in clearing them out, is shown by their correspondence in position and size. It is difficult to imagine their use. I sent all the measurements of walls, interior and exterior, to Professor Petrie, who deduced that the cubit used was the foot of 13.3 inches, found in Asia Minor. Some of the cylinders which Professor Sayce has already described were found outside this building. I am inclined to place the date of the structure somewhere between the 11th and 12th centuries B.C. It was just within the northern walls of the inclosure which, during the majority of periods, was a fort rather than a town, as we find the best buildings to be symmetrically arranged against the outside walls, while the central space in the Tell seems usually to



FROM A PHOTOGRAPH OF THE RUINS EXCAVATED AT THE N.E. QUARTER OF TELL-EL-HESY.

have been an open space, with rougher, smaller buildings, corn-pits, &c. These rooms suggest the long line of rooms with thick walls which Petrie found to the east, above the pilaster building. They may all belong to the same chronological level.

Between this town and the ashes there were the remains of at least two other towns, in one of which there was found building in the usually unoccupied central part. Here we turned up the bronze Egyptian idol with gold collar, about 4 inches high, and the bronze statuette of a she-goat with two kids sucking, as shown in the photograph.



BRONZE IDOL WITH GOLD COLLAR AND BRONZE GOAT WITH KIDS.

(Reduced about one-half.)

The goat has ears, horns and tail, fairly well preserved. They probably belong to the 12th or 13th century B.C. Of the same period is the female figure in pottery, 6 inches long, shown in cut No. 40. We first found a headless figure; it was made very flat, with sharply-pointed breasts, small waist, and prominent hips. A duplicate turned up not long after, also headless. I put them aside, and happened to lay with them a small, rough head in pottery, found later, with a flattened head, probably representing a head-dress, though not distinguished at the back from the neck, so rude was the art. Its hook nose resembled the beak of a bird rather than a human face. One day, by pure chance, I placed this head upon

the shoulders of the decapitated figure, and it fitted exactly along the line of fracture. Moreover, the markings made by some instrument in modelling the clay corresponded exactly; certain lines could be traced from the head to the back. This shows the value of keeping everything from day to day, as a missing fragment may be found at quite another depth. As we found this figure in duplicate, it seems probable that it is a representation of some female deity, which may be identified. Perhaps we have here a specimen of the household gods which were so small that Rachel could hide them among the camel furniture and sit upon them.



FEMALE FIGURE IN POTTERY.

(Reduced one-half.)

In these towns we found quantities of the Phœnician bowls and lamps figured on Plates VII and VIII in Petrie's "Tell-el-Hesi." I should accordingly date some of them as early as the 13th century B.C. In numerous cases we found that near walls a lamp had been placed, with a bowl covering it. Sometimes the lamp was enclosed by two bowls—that is, lying in one bowl, then filled with earth and covered by a second. As we so often found these near the foundations of walls, and in one case under a wall, it occurred to me that they represented some ceremony connected with building a new house. In my photograph of this Phœnician ware may be seen what looks like a lamp (though with the lip made much slighter), with a cup in the centre. Fragments of these bowls had been

found both by Petrie and myself (*see* cut No. 50, page 106, *Quarterly Statement*, April, 1892). Petrie suggests a vessel for two kinds of food. The cup sometimes connects with the saucer by a small hole at the bottom. I suggest a third possibility : a stand for a juglet of the pointed-bottom order, the saucer to catch the water escaping from the porous jar through the hole, which could then be poured off at the lip. The pointed juglets must have had some stand.

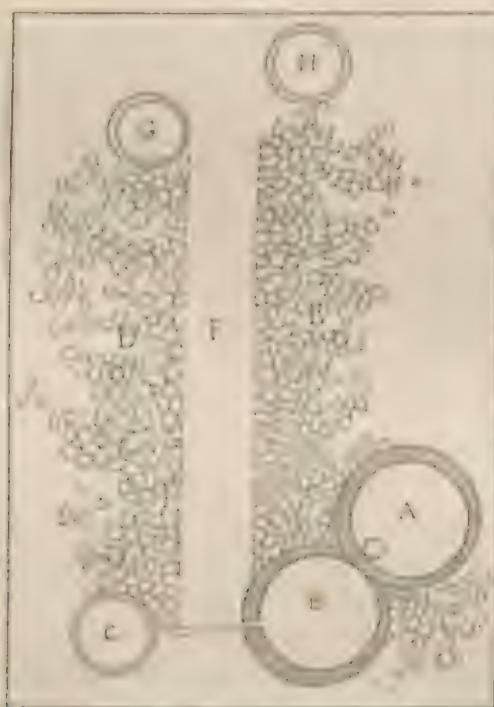


PHOENICIAN POTTERY FROM TELL-EL-HESY.

Just above the ashes we found a wine-press, or a place for making *dibs* (grape treacle), planned in the accompanying cut. First appeared the vat A, with a diameter of 63 inches ; its walls were of mud, and it had a floor of cement somewhat sloping to a hollowed stone placed in the cement. Later appeared the vat B, about 3 feet lower than A. Its walls were of bricks, beautifully preserved, and its floor of cement sloping rapidly to an outlet to the west. I imagine there was a connection with the small pit C, about 3 feet lower, which was lined with rough stones, and in the side of which, towards B, was found a stone spout. The liquor, transferred from A to B, could run from B to C through a pipe, and be collected in some vessel at the bottom of C. The rough pavements, D and E, were connected with the press, and F was a rough way between them, a little lower. G and H were pits similar to C. The cement flooring of B was

made of pebbles embedded in lime, and was so hard that we could not break off a small piece with a hammer. As it had a diameter of over 5 feet and a thickness of 2 feet, it was a problem how to get it out of the way. We stood it up on edge, made a sloping trench, 2 feet wide, to the edge of the Tell, gave it a push, and down it rolled 80 feet to the stream-bed, where it lies to-day. Hollows in the pavements D and E suggested places for the huge cauldrons in which the juice should be boiled for the treacle after the grapes had been trodden in A and filtered from B to C. I have to confess that we destroyed A before we suspected the existence of B, which was at a lower level. Otherwise I should have been able to secure a photograph of this admirably-preserved wine and treacle press of the 13th century B.C. This suggests a principal difficulty of our

North.



PLAN OF WINE PRESS, 1200 B.C.

work. Our task of carefully examining the north-east quarter of the Tell at all its levels is involving the removal of more than 850,000 cubic feet of earth. In order to accomplish this within the limits of our permit, the work must progress with a certain rapidity. On the one hand, there is the necessity of caution to destroy nothing until completely planned; on the other, the need of despatch. The plan of the wine-press, however, is correct.

In another part of the excavation, at the same chronological level, we found a somewhat similar treacle-press, though ruder. Here the place for the kettle was upon two great stones, placed parallel with a stone at the back. Many tannûrs, or pit-ovens occurred.

We now come to the bed of ashes, the removal of which was such an

ungrateful task. From the unbroken lines of ash in the strata, Professor Petrie has argued that they were wind-borne, and date from a period of desolation when the hill was used by alkali burners. A most happy guess, for we have come across the actual place where the process was carried on. As this discovery has just been made during our autumn season, I reserve the description for my next report. Rude constructions of stones and poor brick, much ruined; many bones, and much pottery, furnish traces of the alkali burners themselves. After these buildings fell into ruin, the mounds of ashes and burned vegetable stuff were distributed by the winds over the Tell, lying in the open places in regular stratification, and otherwise mingled with the ruined dwellings. The north walls of the earlier period must have existed in a ruined condition at the time of the burners, for the strata thin out and tilt up against ruined brick at the north, showing that a barrier to their progress existed. When the town was re-inhabited, the old walls were used as a foundation.

These few words suffice to describe the results obtained from the great ash-bed during a month's tedious work, and help to explain the shortness of my report.

The reward for the season's toil came when we were at work on the stratum under the ashes. On Monday, May 14th, ten days before we closed the work, I was in my tent at noon with Ibrahim Effendi, when my foreman Yusif came in with a small coffee-coloured stone in his hand. It seemed to be curiously notched on both sides and three edges, but was so filled in with earth that it was not till I carefully brushed it clean that the precious cuneiform letters were apparent.

Then I thought of a day, more than a year before, when I sat in Petrie's tent at the Pyramid of Meydûm, with Professor Sayce. He told me that I was to find cuneiform tablets in the Tell-el-Hesy, which as yet I had never seen; and gazing across the green valley of the slow, brown Nile, and across the yellow desert beyond, he seemed to pierce to the core, with the eye of faith, the far away Amorite mound. As for me, I saw no tablets, but I seemed to be seeing one who saw them!

To Professor Flinders Petrie, also, belongs a great share in the honour of the discovery. It was a triumphant vindication of his chronology—established, not by even a single dated object, but by pottery, mostly plain and unpainted. The tablet was found in the *debris* of decayed brick and stone, and burning, under the ash-bed, inside the north walls at the north-east corner of the Tell, at a level of 288 or 290, a part which he would assign to about 1,300 B.C.; and in another place in his book he says that, if anything, he has under estimated the age of the various strata of the Tell. Well, here we have a tablet which is plainly to be dated 1,400 B.C., found in the place Petrie dates 1,300 B.C., allowing that it may be older. I know that his estimate of the value of rough pottery for dating ruins has been much questioned, but it seems to me that the point is proved now beyond doubt. Henceforth, the sceptic, before he refuses the approximate dates furnished by the pottery clue, must prove a positive contrary.

The third sharer in the honours of the tablet is the actual discoverer, the lad Suleiman. He is one of the most intelligent, faithful, and honest of the workmen—a simple-hearted lad of about 19 years. He is the last one to be suspected of an imposture—and, indeed, the fresh earth clinging in the incised cuneiform letters was proof enough of its authenticity. In addition, as Yusif in his rounds approached Suleiman, he saw him bending over as if to pick up something, and when he came up to him, the lad was brushing the earth off the face of the tablet, and regarding it with the curiosity which anything new always awakens in these inquisitive fellahîn.

As the impression has gone abroad that the tablet is of baked clay, I will add that it is a very hard, fine stone, of a blackish-brown or coffee-colour, about 3 inches by 2½ inches. The letters are beautifully incised.



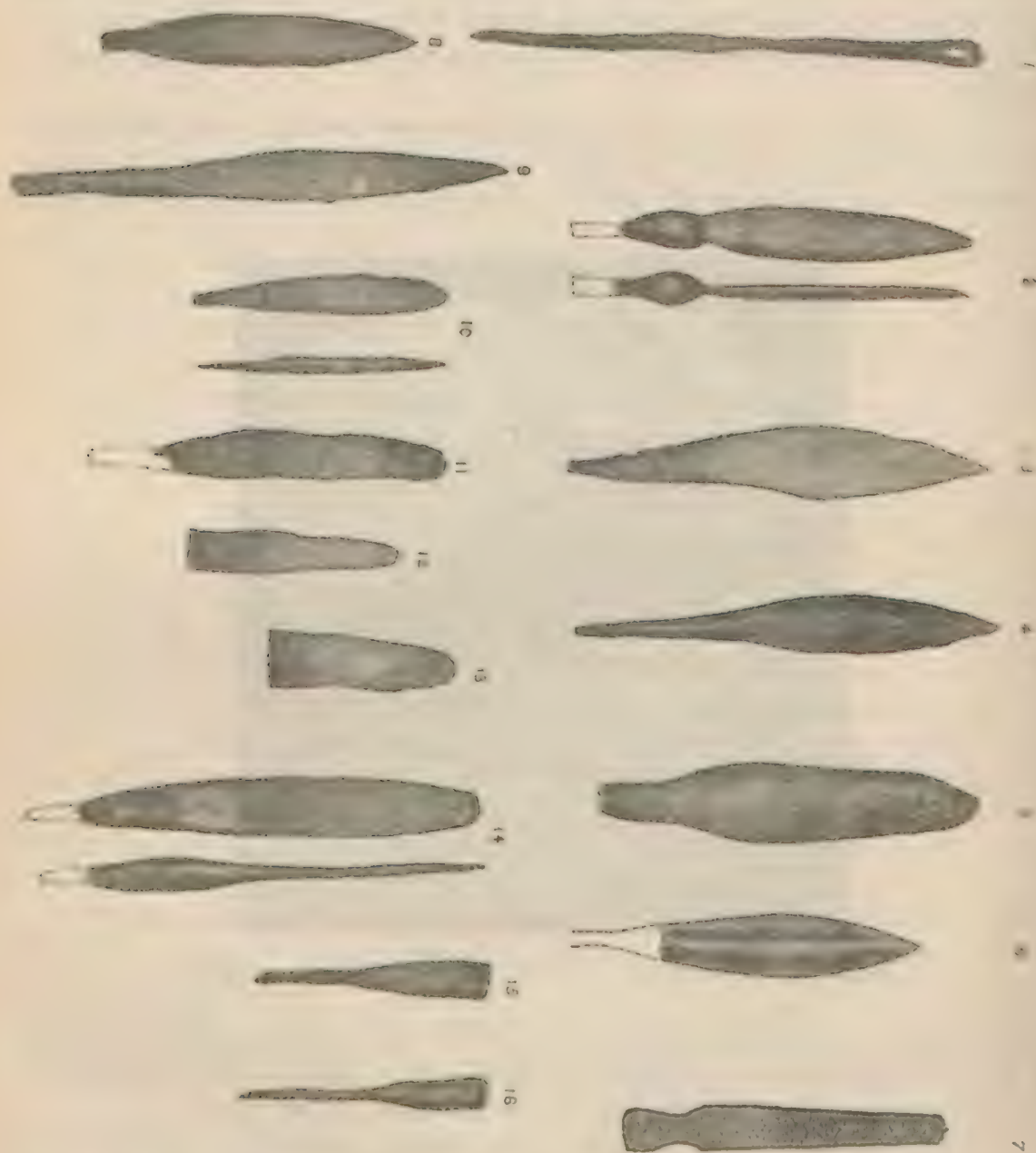
BACK OF INSCRIBED TABLET FOUND AT TELL-EL-HESY.

One corner is slightly broken off, probably by a tap of Suleiman's pick. I am informed by Ibrahim Effendi that it has gone to Constantinople, and is accordingly now in the excellent hands of Hamdi Bey.

As it was impossible to secure the stone, I cast about for the best means of obtaining correct impressions. Many paper squeezes were taken, beaten in with a tooth-brush. If in any given squeeze a certain line was indefinite, in the next I first secured a clear impression of that line. A Syrian dentist, Mr. Amin Haddad, made me a call at the time, and kindly took impressions for me in stent, from which he obtained casts in plaster of Paris.

As my report has been delayed by illness, the present date of writing

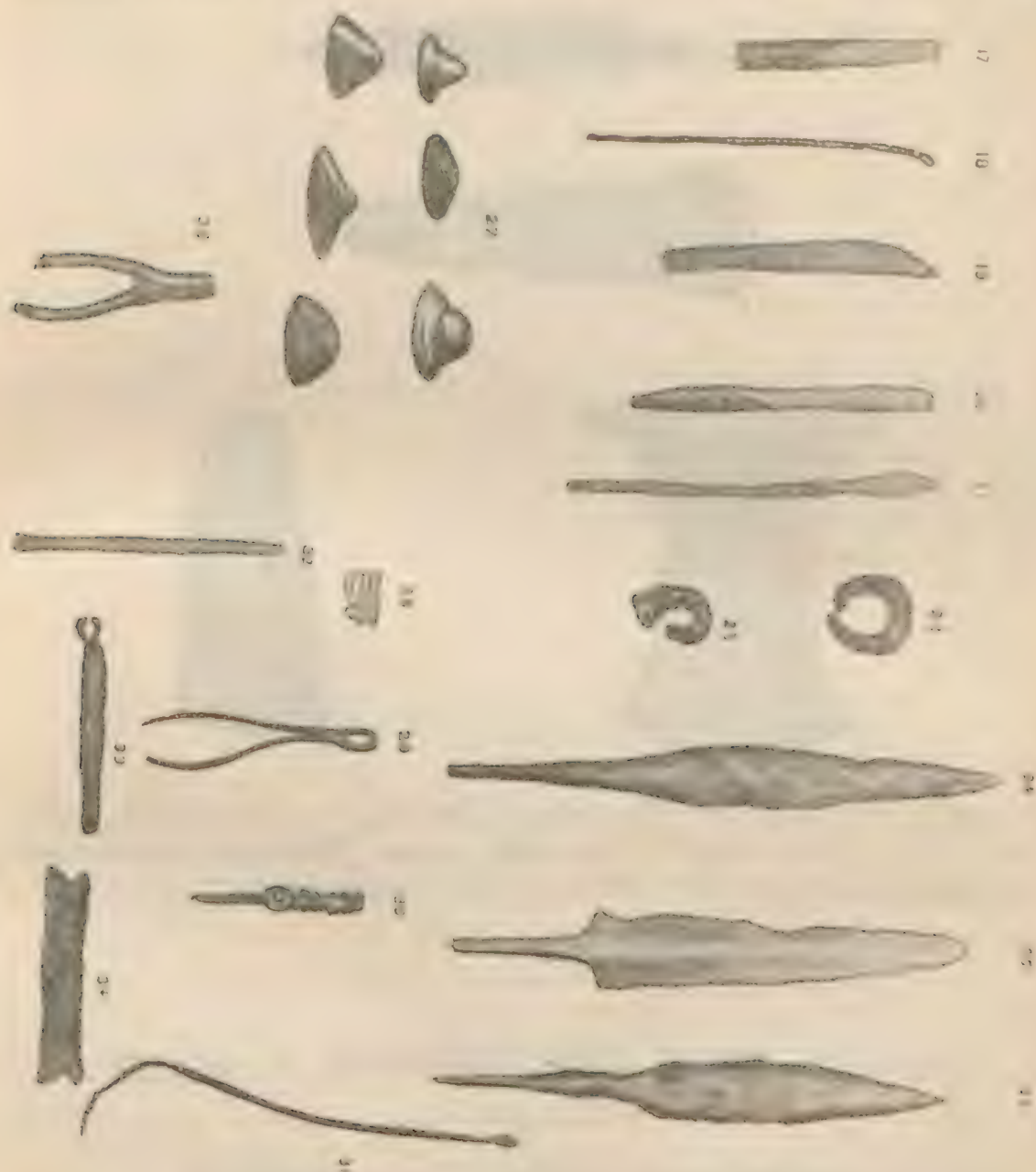
is November, in the sixth week of our autumn's season. The expectation of an immediate discovery of a number of tablets has not been fulfilled, and we have, in our section of the hill, uncovered the town to which this tablet should be assigned. As it was found in *débris*, it may possibly have been cast up from a lower level, and I shall not despair of others until I have examined every cubic foot of earth between the level we are



working upon to-day and the original soil. Should we find tablets lower, they will probably be older, and, of course, the older the better. At the level where the tablet occurred, the characteristic Amorite pottery had not yet appeared in the predominance it has at lower levels. I confess that the utterly ruined condition of every period we have uncovered forbids my hoping to find the archive chamber dear to the faith of Professor Sayce.

But in scattered tablets I believe. However, as Professor Sayce's prophecy has been fulfilled once, it may be again, and my first question to Yusif on riding up to the Tell is usually—"Have you found the Professor's library?"

The pottery was mostly of the Phœnician type. We also found various objects in bronze, of which I send drawings. No. 1 is a long



packing needle ; 2, 3, 5, 6, 11, 14, 24, 25, 26 are all probably small spear-heads ; 12 and 13 are knives ; 15 and 16 are flat-headed—we not determined ; 18 and 31 are needles ; 21 seemed to be of silver ; 22 is a ring ; 27 represents objects in slate, pierced with a hole, which we have found in great numbers, and at all levels ; 28 is a charm of carnelian, in the shape of an eye, with eyebrows—it is pierced with a hole ; 29 is a

pair of tweezers ; 35 is similar, but thicker, more like pincers ; 30 is the top of an ornamental hair-pin ; 32, a scraper ; 37 and 39 are adzes, similar to those found last year, while 36 is a new shape five-twelfths of an inch thick ; 38 is a large spear-head. In the photograph of various objects in stone (dishes, pestles, &c.) may be seen long slabs, flat on one side and



convex on the other, with rounded ends, of which we found many. The stone with markings suggests Phœnician letters. The beads, scarabs, and cylinders have already been described by Professor Sayce.

LETTERS FROM HERR BAURATH C. SCHICK.

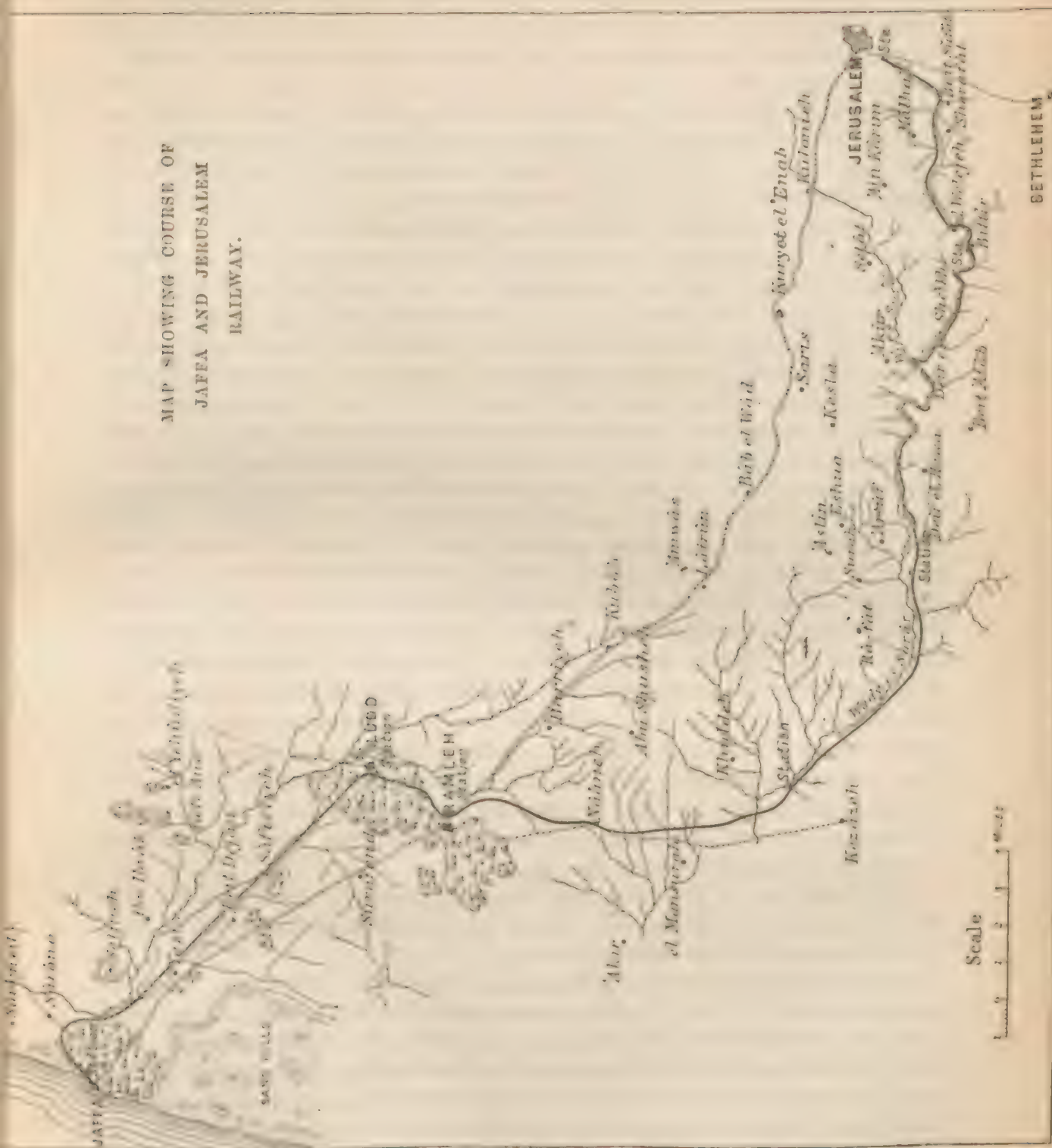
I.—THE RAILWAY FROM JAFFA TO JERUSALEM.

JERUSALEM, *October, 1892.*

An exact tracing of the line I have already forwarded together with a few explanatory notes, and to this I wish to add some remarks.

The railway starts from Jaffa, north of the town, near the sea. It goes first north and north-eastward, and then bending eastwards, in order to go round outside the bulk of the gardens, crosses some winter watercourses

MAP SHOWING COURSE OF
JAFFA AND JERUSALEM
RAILWAY.



and passes north of Yasur, south of the watercourse and going on in a straight line eastwards to Iudd (Lydda) bending there southwards and passing west of the City to the first station, situated south of the town in the neighbourhood of the Mosque and old Church, 19½ kilometres or 62,960 feet from the starting-point. From here it goes with some slight windings southwards to the east side of Ramleh, where there is the second

station, nearly $23\frac{1}{2}$ kilometres or 85,000 feet from the starting-point in Jaffa, with a rise of a little more than 300 feet. From Ramleh it follows for some distance the Jerusalem road on its south side and then bends in a large curve south-eastwards to the village Naaneh, to the west of which it passes at 29 kilometres or 95,000 feet from Jaffa. Then it goes over many winter watercourses in a south-easterly direction comparatively in a straight line to the large Wady Surar, and crossing it in the neighbourhood of Cherbet Kefr 'Ana about 7 kilometres or 23,000 feet from Naaneh goes on the south side of the stream $2\frac{1}{2}$ kilometres further to a place called 'Ain Sejed, which is the third station, $39\frac{1}{2}$ kilometres or 129,500 feet from Jaffa. On the south side, not far from the river bed, is a copious spring. The place is considered unhealthy and the workmen get fever when working there and in the neighbourhood. From here the line goes south-eastwards for 6 kilometres, and then bends and goes direct east for 5 kilometres further, past 'Ain Shems, to Deir Aban, where is the fourth station, a little more than 50 kilometres or 165,000 feet from Jaffa, with a rise of somewhat more than 800 feet, or about $\frac{1}{2}$ in 100 on the average. From here the line enters the mountains, and remains for 6 kilometres or 19,680 feet on the south side of the winter torrent bed, then twice crosses it within a length of 1 kilometre and continues on its south side for about 15 kilometres or nearly 50,000 feet when it crosses to the north side in the neighbourhood of Welejh. About 3 kilometres before this crossing is the fifth station, called Bittir, from the neighbouring village. The bridges over the Wady at Bittir and at Welejh are built of iron. The rest of the way is along the valley in a north-easterly direction past the villages of Sherafât and Beit Sufâfa, and the seven hills Sebâ Rujum, to the neighbourhood of the Bethlehem road south of Jerusalem, close to the German Colony, where is the sixth station, making with the one at Jaffa seven stations in all. The line is 87 kilometres or 285,360 feet long from its starting-point at Jaffa; its termination is 2,445 feet above the sea. From Deir Aban to Jerusalem the ascent is 34 in 500 on an average.

The rails are on the "narrow" system, exactly 1 metre wide. The road is made accordingly, and is not wide enough for two pairs of rails. It is in general 13 feet wide on the top.

The opening of the line took place on the 26th September. A Commissioner sent by the Turkish Government from Constantinople, some members of the Society, or Company, in Paris who have built the road, the Chief Engineers, His Excellency the Pasha and other members of the local government, together with the representatives of foreign nations, and many European and native gentlemen were present. Whilst the military band played, three he-goats were killed as a Corban or offering, then some speeches were delivered, and afterwards the decorated locomotive with a train started on an excursion some miles down the line and back again. Every one, as far as there was room, was allowed to go in the train, and so it went on the whole day. In the evening a grand banquet of 150 guests

¹ The straight line from Jaffa to Ramleh is $18\frac{1}{2}$ kilometres.

was held in a tent pitched in the large court before the station. The intended fireworks were not let off, as they had not arrived. For a few days afterwards all who wished could use the railway gratuitously, and then every one had to pay.

Every morning at 6.30 o'clock a train starts from Jerusalem and arrives at Jaffa about 9 o'clock. In the afternoon it returns at 3 o'clock and arrives at 6 o'clock.

In the mountains the locomotive often will not work, or is too weak and stands still. Just now a gentleman paid me a visit, and told me that in the mountain the locomotive had become broken, and they had had to stay four hours on the spot. A messenger went to the next station, and from there it was telegraphed to Jaffa. The train was taken backwards to the last station, where another locomotive, which was brought from Jaffa, was put on, and so they arrived at Jerusalem after 12 o'clock at night.

Every Sunday there is an extra train in the afternoon from Jerusalem to Bittir, and many people use it to spend some hours with their friends or families in the vineyards and gardens of Bittir, returning in the evening before the train from Jaffa arrives.

There are only two classes. The prices are the following:—From Jerusalem to Bittir and back, first class 9 francs; second class there and back 3 francs; and from Jerusalem to Jaffa, first class 15 francs, returning also 15 francs; the second class 5 francs and returning 5 francs. The first class costs three times as much as second class; people think it cannot remain so, but that some alteration is necessary.

II.—ON THE SITE OF CALVARY.

JERUSALEM, *November 2nd*, 1892.

In the interesting paper of the Rev. J. E. Hanauer "On the Controversy regarding the Site of Calvary" which appeared in the *Quarterly Statement* of October, 1892, he gives (on p. 304) some reasons for thinking that the "second wall did not take the course the traditionists suppose," and as I myself have laid it down in some papers and plans. As my name is mentioned in Mr. Hanauer's paper, I desire to put these objections in the proper light, especially since the question of the real site of Calvary is now in the minds of so many.

Mr. Hanauer numbers these objections from one to five, and I will speak of each in order.

Objection 1—"The second wall did not run in a 'zigzag,' but in a curve." As far as I know, the Greek word used by Josephus is generally translated *embracing* or *encircling* (which even a zigzag does), but the late Mr. Drake—a man I should think to have been competent in such matters—told me one day expressly: "In whatever direction you draw

the line of the second wall, do it in a *serpentine line*, for this is the proper meaning of Josephus." Now a serpentine line is not far from a zigzag. And this objection is not of much weight.

Objection 2—"According to Mr. Schick's theory, the wall would, after passing the site of Calvary (traditional), have had to cross, before reaching the Antonia, a valley at a point where the ascertained rock-levels prove it to have been from 80 to 100 feet deep." This is no objection at all, for *wherever* the second wall may be drawn, it has to cross the so-called "Wady," the ancient Tyropeon. Even the *northern* wall of the present city sinks from the north-west corner down to the "Bab-el-Amood" 94 feet, and the *southern* wall from the "Bab Nebi Daūd" down somewhat east of the so-called "dung gate," 188 feet. Why, then, should a supposed wall *between* these two, and to same degree parallel with them, not go down 80 or 100 feet? And more than this, the late Mr. Lewin pointed out that Josephus says the second wall *went up* to Antonia, hence it had to *descend* before, and if the second wall be drawn much more north, as the objectors to the traditional site think, for instance, across the valley at the Damascus Gate, from thence to the Antonia, the wall went *down* and not *up*.

Objection 3—"It is scarcely possible to locate twenty towers along this proposed line (Mr. Schick scarcely manages to place eighteen), and certainly not forty." Answer: But "forty" is a mis-reading. Copies of Josephus, which I have in my possession, only state fourteen towers, and so all *German* scholars take it, especially the critical Tobler. So also the English writer Lewin gives it in his book, "The Siege of Jerusalem," p. 363, where he says: "The second wall had only fourteen towers," and puts in a note: "Indebted so much to Mr. Fergusson, we can readily pardon the mistake of forty for fourteen, but any argument built upon the error, of course, falls to the ground"; and hence also Mr. Hanauer's third objection will fall to the ground.

Objection 4—"The size of stones, and the diagonal dressing on the remains north-west of the Pool of Hezekiah, mark them as belonging most probably to the Crusading period, and not to the 'Corner-gate of Biblical times.'" Answer: When I made this suggestion in the year 1882, the actual remains of the second wall were not yet known. They were found several years afterwards, when the New Grand Hotel was built. Instead of the "remains" of which Mr. Hanauer speaks, the wall really found speaks in regard of the line in my favour as it ends at the point where I bent the second wall eastwards; hence this objection also is in reality not against my line.

Objection 5 is so long that I will not quote it. It states simply that the *foss* I put between the site of the Church of the Sepulchre and my second wall, with its fortress (the tower of "Castor" in Josephus) can be

¹ Fourteen towers is also more in conformity with the very short description of the second wall by Josephus. A wall with 40 towers, and hence of a considerable length, required a longer description.

explained also otherwise: agreeing that there *is* such a foss is enough for me.

I make these notes simply to show that objections to any suggestion, which at first sight look very striking, may dissolve into nothing when properly examined, as is the case with those here alluded to. My conviction is that *the question of the real Calvary will never be satisfactorily settled by controversy, but only by excavations.*

THE CUNEIFORM AND OTHER INSCRIPTIONS FOUND AT LACHISH AND ELSEWHERE IN THE SOUTH OF PALESTINE.

By the Rev. A. H. SAYCE.

THE importance of the discovery made by Mr. Bliss at Tell el Hesi cannot easily be over-estimated. The cuneiform tablet found in the Amorite stratum of the mound is the first record of pre-Israelitish Canaan which has been yielded up by the soil of Palestine, and it is a token and earnest that more are to follow. It is plain that Mr. Bliss has reached the entrance to the palace or the archive-chamber of the Governor of Lachish in days when it obeyed the rule of Egypt, and when the Israelitish invasion was still distant. The tablets found at Tell el Amarna have told us what we may expect to find when the archive-chamber is thoroughly explored. Not only will there be despatches and letters similar to the one which has been brought to light, but we may also expect to disinter among them other texts as well. Copies of Babylonian myths, as well as fragments of comparative dictionaries, have been met with at Tell el Amarna, and the analogy of the libraries of Babylonia and Assyria would lead us to infer that in Palestine we shall find histories of the Canaanitish States and the annals of their kings.

Besides the cuneiform tablet, Mr. Bliss has discovered other relics of antiquity which belong to the same age. Among these are Egyptian beads and scarabs of the period of the eighteenth dynasty. On one of the beads are the name and title of Queen Teie, the wife of Amenôphis III, and the mother of Amenôphis IV (or Khu-n-Aten), to whom the greater part of the Tell el Amarna correspondence was addressed. Another bead is of amber, and since beads of Baltic (and not Sicilian) amber were found by Dr. Schliemann in the prehistoric tombs of Mykénæ, we may conclude that the amber trade between the Baltic and the Mediterranean was already in existence in the time of the eighteenth Egyptian dynasty, and that the wealthy Amorites of Lachish adorned themselves with the product of the northern sea.

The following is my transliteration and translation of the inscription :—

1. [A-na am]ila raba ki-be-ma Ba-al (?) . .
To the officer¹ say : Bal (?) . .
2. a-bi
. abi
3. a-na sepâ-ka am-ku-ut.
at thy feet I prostrate myself.
4. lu-u ti-i-di i-nu-ma
Verily thou knowest that
5. tu-sa-tu-na D.P.² Ba-du (?) . .
have brought (?) Badu (?) . .
6. û D.P. Zi-im-ri-da
and Zimrida
7. bu-wa-ri ali û
the spoil (?) of the city, and
8. ik-ta-bi-mi
says
9. D.P. Dan-Hadad a-na D.P. Zi-im-ri-da
Dan-Hadad to Zimrida
10. [a]-bi al Ya-ra-mi
my father : The city of Yarami
11. [is]-ta-par-mi a-na ya-a-si
has sent to me ;
12. [id]-na-ni-mi
it has given me
13. III (?) GIS-KHUR û III se-du
3 (?) pieces of green wood (?) and 3 slings
14. û III nam-za-ru-ta
and 3 falchions,
15. sum-ma-mi a-na-ku
since I
16. uts-ba-te-na eli mati
am perfect (?) over the country
17. sa sarri³ û a-na ya-a-si
of the king, and against me
18. in-ni-ip-sa-at
it has acted ;
19. û a-di mi-u-ti maqatu-mi
and until my death is there fighting.
20. su-ut mu-ul (?) -ka
As regards thy . . .

¹ Literally, "great man;" a term used in the Tell el Amarna tablets in the sense of "governor."

² Determinative prefix.

³ *I.e.*, the Egyptian king. The phrase is of frequent occurrence in the Tell el Amarna tablets.

21. sa u-sa-at is-tu nakri
 which I brought (?) from the enemy
22. . . -a- . . û us-si-ir
 and I have sent
23. Bel (?) -bani-la (?) û
 Bel (?) -bani-la (?) ; and
24. . . ra-bi-ilu-yu-ma-[khir]
 . . rabi-ilu-yuma[khir]
25. [is-ta-] par akhi-su
 has despatched his brother
26. a-na mata an-ni-tam
 to this country
27. a-na [da-na-ni-sa ?]
 to [strengthen it].

Quite as interesting as the beads and scarabs are the seal-cylinders which were found along with them. One of the latter is an imitation in Egyptian porcelain of a Babylonian original, which must have been manufactured in Egypt, and would of itself point to a close intercourse between Egypt and Babylonia. Some of the cylinders were imported from Babylonia, and belong to the period B.C. 2000-1500, but the larger part of them are rude copies made by Western artists in imitation of Babylonian models. Precisely similar copies have been found in the prehistoric tombs of Cyprus, more especially in the neighbourhood of Nikosia, as well as in Syria, and Mr. Bliss's discovery now enables us to fix their age.

The cuneiform tablet remains in the hands of the Turkish Commissioner, but careful squeezes and wax impressions of it were sent to England last June. I awaited the arrival of them with almost breathless impatience, as I had promised the Committee of the Palestine Exploration Fund that sooner or later cuneiform tablets would be found at Tell el Hesi, and the fact that several cuneiform inscriptions on slabs of stone have been forged of late years in Palestine, made me fear that a disappointment was in store for me. When Mr. Armstrong brought the impressions to Oxford, and we had unpacked them together, my relief was great. The cuneiform inscription was not only genuine, the tablet on which it was inscribed was just one of those which I had long believed were lying buried under Palestinian soil.

In size and shape it resembles the tablets sent from the south of Canaan which have been discovered at Tell el Amarna. The forms of the cuneiform characters, moreover, which appear on it, are those which we now know to have been used in Southern Canaan about B.C. 1400. Lastly, the formulæ and grammatical forms are identical with those employed by the scribes of Southern Canaan when writing to the Egyptian kings. We find them in the tablets of Tell el Amarna as well as in the tablet of Lachish.

The fact that the original is not accessible has made the copying of

the cuneiform text somewhat difficult. Indeed, it is sometimes impossible to tell from the impressions what exactly are the characters at the edges of the tablet or where the surface of the tablet is worn. Hence the lacunæ and indications of uncertainty which exist in my copy of the inscription. A translation of the text has been further rendered difficult by the existence in it of words which have not been met with before, and which are, therefore, of doubtful meaning. Fortunately, however, enough is clear and certain to show us what the letter—for such it is—is about, and to what period it belongs.

What makes this letter so particularly interesting is that we already know something about Zimrida, who is twice mentioned in it. Zimrida, or Zimridi, as he is also called, was Governor of Lachish in the reign of Khu-n-Aten, and a letter from the King of Jerusalem to the Egyptian Pharaoh informs us that he was murdered at Lachish “by servants of the (Egyptian) King.” One of the despatches discovered at Tell el Amarna was sent by him to Egypt, and runs thus: “To the King, my Lord, my Gods, my Sun-god, the Sun-god who is from Heaven, thus (writes) Zimridi, the Governor of the City of Lachish, thy servant, the dust of thy feet, at the feet of the King, my Lord, the Sun-god from Heaven, bows himself seven times seven. I have very diligently listened to the words of the messenger whom the King, my Lord, has sent to me, and now I have despatched (a mission) according to his message.”

That the first tablet discovered at Tell el Hesi should contain the name of Zimrida, or Zimridi, is the best proof we can have that Dr. Flinders Petrie was right in identifying the *tel* with the site of Lachish. The discoveries of Mr. Bliss have further proved that he was right in his chronological arrangement of the successive strata of the *tel*, the lowermost layer representing the Amorite period before the Israelitish conquest of Canaan. We can now, therefore, accept without misgiving his views in regard to the relative ages of the different kinds of Palestinian pottery, as well as of the buildings he disinterred at Tell el Hesi itself.

To me the discovery of the tablet is especially pleasing. Years ago the name of Kirjath-Sepher, or “Book-town,” coupled with other considerations, led me to the belief that pre-Israelitish Canaan possessed its libraries of clay tablets like Assyria and Babylonia, and after my first visit to Southern Palestine in 1880, I was anxious that the Palestine Exploration Fund should excavate in some of the large *tel*s I had examined there. I felt convinced that cuneiform records upon clay would be found beneath them, and that in these old monuments of a past civilisation we should, as it were, dig up the sources of the Book of Genesis. The discovery of the tablets of Tell el Amarna, followed by Dr. Petrie’s identification of Lachish, went far towards confirming my belief and encouraging me to hope that before long we should have before us an ancient Canaanitish library. What an important bearing this must have upon the criticism of the Old Testament need not be described.

It is sufficient to know that we are on the eve of discoveries such as could not have been dreamed of a few years ago. What has been already

found has shown us that in B.C. 1400, when Palestine still obeyed the tottering Government of Egypt, letters upon imperishable clay were being stored up in the archive-chamber of Lachish. The time has come when the buried records of the past are about to speak once more, and tell us, it may be, of days when Abram, the Hebrew, pitched his tent in the neighbourhood of Hebron, and paid tithes to the King of Jerusalem.

Lachish, however, is not the only place in Southern Palestine where memorials of the Egyptian domination have been found. Last spring certain objects were discovered by the natives at or near Gaza, on which was an inscription in Egyptian hieroglyphics. Mr. Bliss took an impression of the inscription, which he sent to the Museum of the Fund. The inscription consists of a cartouche containing the prenomen of Amenôphîs II (Ra-ân-kheperu) of the eighteenth dynasty, and beneath it are the words, "the Temple of Mut." It seems probable, therefore, that the object on which the inscription is engraved comes from a temple of the goddess Mut which was built by Amenôphîs II at Gaza. Amenôphîs II was the son and successor of Thothmes III, the Conqueror of Canaan.

Egyptian pottery, inscribed with the mutilated cartouches of Ramses II, "the giver of life," was found at Namus, near the Jebel Hadîd, many years ago, and has long formed a portion of the collection of antiquities in the possession of the Palestine Exploration Fund. But this pottery belongs to a later period than the age of the Tell el Amarna tablets. Ramses II, the Pharaoh of the Oppression, belonged to the nineteenth dynasty (B.C. 1348-1281), and the pottery disinterred at Namus is an evidence only of the temporary restoration of Egyptian power in Canaan, which took place in his reign. Of a different character is an ivory plaque found on "Ophel," which has also long been in the possession of the Fund.

This is ornamented with the following pattern





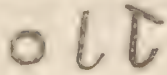



The same pattern

surrounds the cartouche of Thothmes III on a scarab now in the Ashmolean Museum at Oxford, and we are thus justified in regarding it as characteristic of the age of the eighteenth Egyptian dynasty.

The same pattern is also found on two of the clay vase-handles (Nos. 42 and 68), which were discovered at the foot of the Haram wall at Jerusalem, and about which Mr. Baker Greene has contributed an article to the *Quarterly Statement* of the Fund (1881, pp. 304, *sqq.*). On one of them (No. 68), the concentric circles have been stamped (while the clay was still soft) over a representation of the winged solar disk, below which are the two Phœnician characters *sh-t*. Another vase-handle shows that above the winged disk was originally the word *L-M-L-K* (*lê-mêlek*). Above and below the disk we have on other handles *[L]-M-[L]-K sh(?) K-H* (No. 69) and *L-M-L-K z-ph* (No. 70). The latter inscription is accompanied by the concentric circle pattern. I hope hereafter to write more fully upon these interesting specimens of early Phœnician epigraphy.

At present I must return to Lachish. Here certain fragments of Amorite pottery have been found incised with potters' marks, similar to those discovered by Dr. Petrie at Gurob in the Fayûm, and at Tell el


Amarna. Three of these marks are W X and , the first two of which have the same forms as the *shin* and *taw* in the early Phœnician alphabet.

Of later date is the mark  found on the inner side of the bottom of a white vase, which resembles the Phœnician *lamel*. But the most interesting piece of early pottery is one that was dug up in 1891, from a depth of 300 feet. This belonged to a flat dish, on the inner side of the bottom of which is the incised inscription . The two last characters  present no difficulty, but I am unable to identify the first. It can hardly be intended to represent , since there is no such word as . Whatever may be the interpretation of the inscription, however, it is the oldest example of Phœnician writing which has as yet been met with.

I must not conclude this brief paper without a reference to a remarkable circular stone weight, numbered 283 in the collection of the Fund, which is figured on p. 492 of the "Recovery of Jerusalem." After a long hunt through the correspondence received from Sir Charles Warren by the Committee of the Fund, Mr. Armstrong and myself have found that it was discovered under the pavement of Robinson's arch at Jerusalem, though unfortunately there is no record of the exact depth at which the workmen came across it. It bears an inscription on either side, hitherto supposed to be in "Phœnician letters." A slight inspection of it, however, showed me that the characters are really those of the Cypriote syllabary, and that in the weight we accordingly have evidence of intercourse between Cyprus and Jerusalem at a comparatively early period.

The inscriptions are as follows:—

(1) On the front: 

(2) On the back: 

The first inscription reads *Ti-ga-ra(t)-ro(t)*. The third character may, however, be *po*, and the last cannot be identified with certainty. It may possibly be intended for *ra*. The first two characters are fortunately certain, and represent some Greek name beginning with *Δα*. The inscription on the back is *Ta-ve-ri*, the Greek *δαφῆρι*.

The existence of this Cypriote inscription, coupled with the discovery of early Greek pottery at Lachish, goes to show that there must have been a considerable Greek population in Southern Palestine in the seventh

and sixth centuries B.C. The Assyrian King Sargon, in describing his campaign against Palestine in B.C. 711, states that Akhimit, whom he had made King of Ashdod, had been dethroned by his subjects (or more probably by Hezekiah of Judah), and "a Greek (Yavana) who had no right to the throne," had been made king in his place. It was this event which led to the siege of Ashdod referred to in Is. xx, 1, and it shows that Greek influence was already powerful on the Philistine coast. The Greek writer, Stephanus Byzantinus (s. v. 'Ιόνιον), tells us that Gaza was also called Ióné, while the sea between that part of Palestine and the frontier of Egypt was known as the "Ionian." All this points to Greek colonisation, possibly from Cyprus, which the Assyrians entitled the island of "the Ionians."

ON AN INSCRIBED BEAD FROM PALESTINE.

By the Rev. Prof. A. H. SAYCE.

THE perforated "bead" of reddish yellow stone which Professor T. F. Wright, of Cambridge, Mass., obtained from Jerusalem is exceedingly interesting. The inscription upon it is as follows:—

נצג

The letters are those of the alphabet of the Siloam inscription, and must therefore belong to the same period as the latter. They read n-ts-g, i.e., *netseg*. Now, in the *Quarterly Statement* for October, 1890, p. 267, an account will be found, by Dr. Chaplin, of a hematite weight he obtained at Samaria, on which is an inscription in letters of pre-exilic form, which Dr. Neubauer has interpreted as meaning "a quarter of a quarter of a *netseg*." The word *netseg* is not met with in the Old Testament, and is not to be found in the Hebrew lexicon.

The use of the word on Dr. Chaplin's weight led to the belief that it signified a particular weight which Dr. Flinders Petrie reckoned at 627 grains. Dr. Wright's weight, however, shows that this cannot be the case. His "bead" weighs only 8.65 grammes, so that we must either assume that there were two weights called *netseg*—which is very improbable—or else suppose that the word simply means "a standard weight." If Dr. Neubauer is right in connecting it with the root נצג, this latter signification would be very natural.

I ought to add that the forms of the letters are important, as they show, even more plainly than those of the letters in the Siloam inscription, that they have been imitated from forms traced by the pen on papyrus or parchment. The "tails" of the *nun* and *gimel* are shaped so as to resemble curves instead of straight lines. This is fresh evidence that the literature of Jerusalem was upon papyrus or parchment rather than

stone or metal. People who were accustomed to write upon the two latter materials would have made their letters angular, like the letters of the Moabite stone, or those which we see on Dr. Chaplin's weight.

THE SITE OF KIRJATH-SEPHER.

By Professor A. H. SAYCE, LL.D.

YEARS ago I urged that Kirjath-Sepher or "Book-town" must have been the site of a Canaanitish library, consisting, like those of Assyria and Babylonia, of tablets of clay, and that if its ruins could be discovered, the clay books it contained would be found still lying under the ground. The discovery of the tablets of Tel el-Amarna brought with it a partial confirmation of my opinion; the discovery of a cuneiform tablet at Tell el-Hesi has now rendered that confirmation complete. If once the site of Kirjath-Sepher can be determined, we may excavate upon it in full confidence that a library of ancient Canaanitish records will be brought to light.

The recovery of the site thus becomes of great importance. Unfortunately the indications we possess of the exact geographical position of the city are exceedingly vague and indefinite. It was destroyed almost at the beginning of the Israelitish conquest of Canaan, and its precise situation seems to have been forgotten. Beyond the fact that it was near Hebron, later generations remembered but little about it.

Nevertheless the discovery of its remains is so important to the student of the Bible and of ancient history that even an approximate determination of its situation will not be useless. Materials have recently come to light which seem to bear upon the question, and it is consequently less difficult now to examine it than it was a few years ago. It is true that the several links in the chain of reasoning are weak, but taken together they form a mass of presumptive evidence which is at all events the best at present attainable.

From the Old Testament we learn that Kirjath-Sepher was a name given to a city also called Kirjath-Sannah and Debir (Josh. xv, 15, 49). What Kirjath-Sannah means it is impossible to say; the ordinary explanation of the name as "the City of the Law" hardly deserves mention. The analogy of Kirjath-Arba would lead us to infer that Sannah was the name of a person or a god. Debir, however, signifies the "Sanctuary," and in 1 Kings vi, 5, is the word applied to the Holy of Holies in the temple at Jerusalem. It shows that the city to which it was attached was consecrated by the existence in it of one of the chief shrines of southern Canaan. We know that the clay libraries of Assyria and Babylonia were established in the temples, a room or rooms in the sacred building being set apart for their reception. It is not surprising, therefore, that the Canaanitish Debir was also the site of a library from

which the town derived its popular name of Kirjath-Sepher or Book-town.

The city stood near Hebron. This is evident from Josh. x, 38, and xv, 15. But it also stood on higher ground, since Caleb "went up" to it from Hebron. Moreover it appears from Josh. x, 38, that it lay to the west of Hebron, since the Hebrew forces first marched eastward from Lachish and Eglon to Hebron and then "turned back" to Debir. It would further seem from Josh. xv, 19, that it was situated in "the Negeb" or "southland"; unfortunately we do not know how far to the north the latter term extended. One of the "springs," however, given by Caleb to Achsah may have been the famous springs of Hebron. Finally in Josh. xv, 49, Kirjath-Sannah or Debir is described as one of the eleven cities of Judah which were built in "the mountains." The only one of these which can be identified with any approach to probability is Socoh, called Suqa by Thothmes III, who places it westward of Gath and Lydda, and Shauqa by Shishak. It is probably the modern Shuwêkeh, a little to the south of 'Ain Shems and westward of Tell es-Safiyeh.

This is the sum of the information given us by the Old Testament in regard to the site of Kirjath-Sepher. We must now turn to other sources of information and see if they can throw any further light on the matter.

In one of the Tel el-Amarna tablets mention is made of a city which may be the Kirjath Sannah of the Book of Joshua. In a fragmentary letter of Ebed-tob, King of Jerusalem, now preserved in the museum of Ghizeh, we read: "Behold, the country of Gath-Carmel has fallen away to Tagi and the men of the city of Gath. He is in Bit-'Sani; and we have effected that they should give Labai and the country of the 'Sute to the district of the Khabiri."¹ Bit 'Sani would correspond to a Hebrew Beth-Sannah, and it seems probable that Beth-Sannah, "the temple of Sannah," and Kirjath-Sannah, "the city of Sannah," were one and the same. If so, Kirjath-Sannah would have been situated not far from Shuwêkeh, westward of Gath and eastward of Hebron. It may be added that in the list of Palestinian places enumerated by Thothmes III at Karnak, Kuthan Karman, the Gath Carmel (Gimti-Kirmil) of the letter of Ebed-tob, precedes the names of Batia and Tapun.² A Tibneh is marked on the maps between Shuwêkeh and 'Ain Shems.

More assistance is to be obtained from a discovery I made at Mallinet Habu in the winter of 1891-2. Here I found that Ramses III of the Twentieth dynasty has given a list of places conquered by himself in what was afterwards the territory of Judah. Among these we find the name of Khinur or Hebron, corresponding to the Khabiri, "Confederates," of the Tel el-Amarna tablets. Then comes Inu or "Spring," with the determinative

¹ A re-examination of the tablet this winter has enabled me to correct Winckler's copy of this passage and, consequently, the translation I have given of it in the new series of the "Records of the Past," Vol. V.

² See "Records of the Past," new series, V, pp. 50, 51.

of "water," the famous springs of Hebron, now represented by the 'Ain el-Qâna and other springs further to the north.

After Ina follow the names of "the land of Lebana" and Apaqa or Apheh, next the unknown Abakhi, Magthil or Migdol, and Qarzak. Then we have Karimana or Karmel, "the upper district of Thabara," Shimshana, Hadashath, Arez, and "the district of Salem" or Jerusalem. Arez is, of course, the Hebrew *arez*, "land," with which Hadashath "new" agrees, *arez hadashath* being literally "the newlands." Hadashath is the Hadashah of Josh. xv, 37, where it is associated with Migdal-Gad, which may be the Migdol of the list of Ramses III. The two places are grouped with Eglon and Lachish, which we now know to be represented by the modern Tell el-Hesy.

Shimshana, Shimshôn in Hebrew, would be a city of the Sun-god, and we may therefore identify it with Beth-Shemesh, which seems to be called Ir-Shemesh in Josh. xix, 41. Beth-Shemesh or Ir-Shemesh has been located at or near the modern 'Ain Shems, north of Shuwêkeh; at all events it must have been in that neighbourhood. Karimana cannot have been the Carmel south of Hebron, as this would have lain in a different direction from that of the places which can be identified, and it must accordingly be the Gath-Carmel of the Tel el-Amarna tablets and the list of Thothmes III, between Gath and 'Ain Shems.

What, now, was "the upper district of Thabara"? The fact that it had a "district" or territory attached to it shows that it was a place of some importance, and the epithet "upper" further shows that it stood on high ground. The Hebrew name corresponding to Thabara would be Dabara, or, with a change of the vowels, Debir, and it is with Debir or Kirjath-Sepher that I accordingly identify the town. In this case, Kirjath-Sepher would have stood on high ground between Gath-Carmel and Beth-Shemesh.

We are thus again referred to the country west of Gath and east of 'Ain Shems and Shuwêkeh for the site of the ancient Canaanitish "City of Books." If Mr. Tomkins is right in regarding Tell es-Safiyeh as the site of Gath, the locality within which we are to look for the ruins of Gath-Carmel and Kirjath-Sepher is reduced to very narrow limits indeed. The only map to which I have access at the present moment—that in Baedeker's "Guidebook to Palestine and Syria"—marks only two *tells* in this locality, one of which is called Tell Keshim. But the map of the Survey doubtless indicates others. Moreover the identification of Gath with Tell es-Safiyeh is not certain; there are scholars who think Bêt-Jibrîn a more probable site.

However this may be, I believe it is in this direction that we must look for the remains of Kirjath-Sepher. Professor Petrie states that he found a fragment of Amorite or early Jewish pottery at Khurbet Dhikrîn, a little to the south of Tell es-Safiyeh, and Khurbet Dhikrîn has been supposed by some to represent Gath.

NARRATIVE OF A SECOND JOURNEY TO PALMYRA,

including an exploration of the Alpine regions of Lebanon and Anti-Lebanon, and the southern half of the Nusairy Chain.

By Rev. GEORGE E. POST, M.A., M.D., F.L.S.

(Continued from October "Quarterly Statement," p. 328.)

As soon as the moon rose we were on our way again, descending at first by an easy but perceptible gradient, then almost imperceptibly towards the plain of the Orontes. The air became quite chilly as the night wore on, and both man and beast became oppressed with sleepiness. Our guide, Rusheid, rode before us on a white camel, and after the moon set his camel was all that we could see in the darkness. Rusheid never for a moment missed his way, and just as morning broke he dismounted at the first wells, about three hours east of Barri. He found them choked with locusts, and the water quite undrinkable. He found there two wild swine which had come in vain to search for water. We had nothing left after this disappointment but to press on over the seemingly endless plain to Barri. We arrived at 6½ a.m., twenty-six hours after leaving el-Weshen. Just before reaching it we came upon a considerable herd of gazelles.

Wednesday, July 30.—Barometer at 7 a.m. 28.4, height, 1,900 feet. The water at Barri is sweet and cool, and the refreshment to mind and body of the sparkling spring and flowing stream was indescribable. We pitched our tent, and, as soon as we had breakfasted, lay down to enjoy a much-needed sleep. A furious wind sifted the dust in clouds into our tent, and over us as we lay in bed, but nothing could keep us from sleeping. We awoke at midday to take our lunch, and then took an afternoon nap.

Toward evening we went over to take a photograph of the village from the *tel*. Every village in these parts has a *tel*, or hill, the site of an ancient castle or tower, which, in falling to ruins, leaves a truncated cone formed by the *débris* of the edifice. The houses of Barri are almost all conical, the prevailing style in all the villages of the Orontes plain between Hems and Hamah. During our walk we collected *Heliotropium villosum*, Willd., and *Euphorbia lanata*, Sibb., var. *microphylla*, Post.

A night's rest, added to that of the day, made us forget the fatigues, heat and bad water of our desert journey, and prepared us for the twelve days which still lay before us.

Thursday, July 31.—We left Barri at 6½ a.m., and rode over the level plain for two hours and a half to Salamyeh. Salamyeh is an important

town, the centre of a *Sanjaq*, with a large stone castle, a mejlis, qâdi, and considerable traffic. All the inhabitants but one are Mohammedans. This one keeps a shop, and is a general agent and medium of communication with Christian villages. He gave me a specimen of a piece of bituminous shale (*i.e.*, dolomite, charged with 39 per cent. of hydrocarbons). Dr. Adams and Professor Day, of the Syrian Protestant College, kindly made the following report on it:

Colour, black; streak, greyish-brown; lustre, dull powder-brown; brittleness, extreme; hardness, 2-3; specific gravity, 2.03 (compared with pure water). Combustible with ease; burns with a yellow, luminous, very smoky flame for a short time, after which it does not continue to glow as a coal. The *residue* after ignition is whitish-grey. The *bulk* after ignition is equal to the original piece. *Loss in weight* after ignition, 33 per cent. It is impossible to oxidise all the combustible materials (especially that in the centre), even of small pieces before the blowpipe. *Pulverized* and *distilled* for two hours over an alcohol flame the material lost 25 per cent. in weight, mostly as gases, with some heavy volatile oils. The gases are unfit for illuminating purposes. The *residue* after ignition was found to be Calcium carbonate CaCO_3 , and Magnesium carbonate MgCO_3 . The mineral is found in considerable quantities in the neighbourhood of Salamyeh, and strongly resembles the shales which over and underlies the Lebanon coal.

Most of the houses in Salamyeh are of the conical type of which we had seen so much in Barri and its surrounding villages. They are made of sun-dried bricks, laid up with mud, and braced above by horizontal poles, the ends of which are seen protruding from the cone. The great pitch of the sides of the cone is to prevent the rain from percolating through so porous a material.



View of a portion of Salamyeh, showing the form of houses common in the Orontes Valley.

Half-an-hour west of Salamyeh are two truncated conical tels, on which are ruined castles, once strategic points of importance in defending the Orontes valley from the attacks of the savage hordes of the desert. They are still picturesque features of the landscape.

The road to Hamah, soon after leaving Salamyeh, passes through a swampy tract, in which there is fair pasture during the whole summer. The margin of this swamp was dotted with Bedawin tents, and the pasture

covered with innumerable flocks and herds. The stream that flows out of the swamp empties into the Orontes.

The view of the sparkling river, and the fertile fields and orchards along its banks, was unspeakably refreshing to us after the fortnight in the desert. Every turn of the river opened a new vista of verdure and beauty. Hamah itself, built on a number of hills and bluffs, rising out of the luxuriant foliage of the orchards, is one of the most picturesque cities of Syria. We reached the hospitable house of Mr. Anis Sallûm at 2½ p.m., and were glad for one night to sleep in a house again. Barometer, 29.74, height, 990 feet.

Friday, August 1.—As we were obliged to replenish our stores in Hamah, we did not leave until half past ten o'clock in the morning. Our way lay for three hours over the almost-level plateau, which is doubtless an old lake bottom, out of which the river has scooped its proper valley, at a depth of about a hundred and fifty feet. This plateau is composed of a deep, rich, reddish loam of exhaustless fertility. It has been cultivated for cereals from time immemorial. At this season it is almost destitute of vegetation. At numerous points we passed cisterns by the wayside, constructed so as to store rain-water through the harvesting season, for the use of man and beast. At the time we passed they were all dry. After crossing the plain we began to enter the foot-hills of the Nusairy chain. We followed up the course of a stream which had still a considerable volume of water in pools along its bed, but so befouled by cattle that even our horses could hardly be induced to drink of it, and we were not inclined to take a bath in it. By its banks we collected *Foeniculum officinale*, L., and *Lythrum Salicaria*, L. As we rode farther into the hills the scenery became more wild, the mountains began to assume bold and rugged features, and soon, what had appeared from a distance as a uniform, rounded, whale-back ridge, developed into crags and peaks which almost rival those of Scotland for savage grandeur. We passed through many scrubs of oak and styrax. But for the whole distance from Hamah to within twenty minutes of Qal'at-el-Musyâf we did not encounter a single spring or stream of drinkable water. It was not a little refreshing, after so long abstinence, to find oozing out of the hill-side, just before reaching the castle, a cool, limpid spring of excellent water.

Qal'at-el-Musyâf is a small walled town, with a fine castle at the north-east angle of its wall. It is composed of flat-roofed houses, mostly built of unhewn stone, and is inhabited by Isma'îliyah. There is only one Christian, a jeweller and goldsmith. There are no Nusairiyeh, they and their religion being cordially hated and roundly cursed by the Isma'îliyah. There is a mosque, and a khân, and a few shops.

As was our custom on coming to a village, we asked the sheikh, the Amir Ibrahim, to assign us a place to pitch our tents, and to secure for us the supplies which we needed. To our surprise we found him churlish and inhospitable, and could not get any satisfaction from him. We then sought out and found a suitable place for our tent, but we were greatly

annoyed by the surly manner of the sheikh's son, and one of his companions, a village bully, who tried to prevent the other people from having anything to do with us. At last, however, by our paying no attention to his rudenesses, he became tired of the attempt to annoy us, and took himself off. We then obtained the necessary supplies, and, after placing a guard to prevent depredations during the night, retired. We were not molested, and in the morning found even the sheikh's son somewhat civil. We inferred from some things that were said that the parties who had treated us so rudely the night before were suspicious of us, and supposed that we were travelling through the country with the intention of spying it out, and in some way injuring them.

Saturday, August 2.—6 a.m., Qal'at-el-Musyâf, barometer 28.62, height 1,675. As we passed through the town we bought a few grapes, the first we had tasted this season. We also found good watermelons. Our way lay along the flank of the mountain, by running water, and through fertile orchards and fields. The mountains to the right began to assume bold outlines, and the wild ravines between the peaks seemed quite impassable. After passing through brakes of *Arbutus Andrachne*, L., and myrtle, in an hour from Qal'at-el-Musyâf, we came to *el-Beidîyeh*, a village inhabited wholly by Christians of the Greek sect. Twenty-five minutes farther on we passed *el-Bustân*, a Nusairy village, two minutes to the right of our road. Five minutes farther on we passed through *Fiddârah*, and forty minutes farther *Shamsah*, two Nusairy villages. Passing through the latter village we made our way without any road half an hour along the mountain side, and then struck a steep goat path, up which we led our horses, often at an angle of thirty degrees. On this slope we found a *Sideritis* near *var. incana* of *S. Libanotica*, but probably a new species. The regular road over the mountain to el-Bîreh, which we struck half-way up the incline, was passable, though none of the easiest. It was not till nearly noon that we reached el-Bîreh, which is situated in a valley several hundred feet below the top of the chain. The barometer at 2 p.m. read 27.8, height, 2,750 feet. The water supply of el-Bîreh comes from a fountain almost at the top of the ridge, and is brought down in an open gutter at which the herdsmen water their animals, and into which impurities of many kinds find their way. This carelessness about the purity of the water supply is the more noteworthy, inasmuch as the Orientals are rather remarkable for their fastidiousness in this respect. They will often climb to a considerable height to get their water from a fountain head, rather than take it from a conduit or pipe.

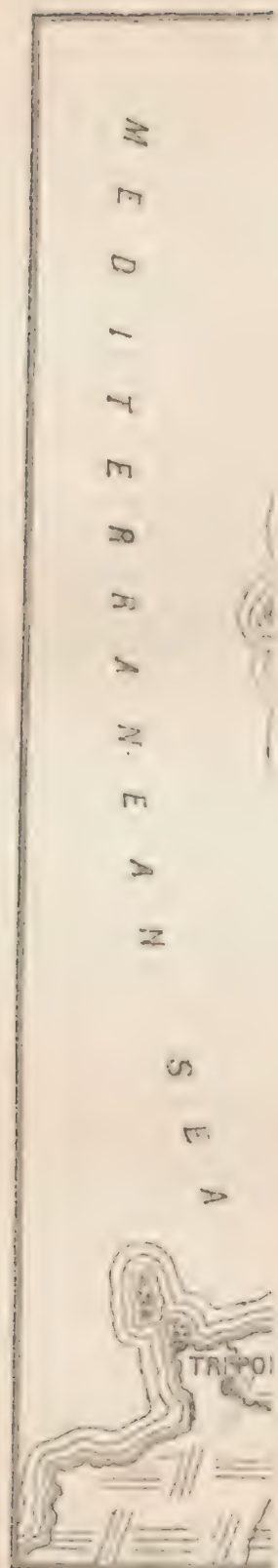
One of our chief purposes in visiting the Nusairy chain was to investigate the great trap dyke which overlies its southern spurs. The chain north of el-Bîreh is composed of limestone similar to that of Lebanon. At the latitude of Qal'at-el-Musyâf there is no trace of trap rock overlying the limestone. At the latitude of el-Bustân there is a ridge which branches off from the main chain, trending to the south west. This ridge encloses between itself and the main chain el-Bîreh and 'Ain-Shems. It is on the top of this ridge that the trap rock first appears. A Nusairy

shrine, Nebi Matta, crowns the summit above el-Bireh. Its walls are built of trap, and its roof covered with limestone slabs brought from el-Bireh. Just south of Shumeiseh the main chain turns toward the south-west, the limestone continuing to a point a few miles south of el-Meshta, where it is capped by trap. This bend to the south-west leaves a bay between the mountain mass at Shumeiseh, and a similar one a few miles to the south, which is the northern end of a ridge of trap trending south by east to the Buqe'ah. This ridge bounds the upper valley of the Nahr-el-Kebir to the east. Between the main ridge and the upper valley of the Nahr-el-Kebir is a series of ridges radiating in a fan shape, all capped at their southern ends by trap. The ridge opposite the southern end of the Nusairy chain, on which the Qafat-el-Huṣn stands, is composed of trap at its eastern, and limestone at its western, ends. At the bottom of the valleys, especially that between the Huṣn range and the Nusairy chain, the limestone underlies the trap, and occasionally crops out in islands and headlands. The trap crosses the Buqe'ah and abuts against the northern spurs of Lebanon.

On either side of the Nusairy chain, from the latitude of el-Bireh to the southern end of the chain, the trap is found. To the east it extends to the Orontes, but not across it. To the west it extends well out toward the sea. The accompanying sketch map gives approximatively the limits of this great dyke. It is about 60 miles long, and almost as broad, and in many places 1,500 feet thick. I did not succeed in finding any crater, or determining the point of eruption.

On arriving at el-Bireh, which is four-and-a-half hours from el-Musyâf, we asked for the sheikh. We were directed to the threshing-floors where most of the men were at work under two inspectors, who represent the *multazim*, or tax farmer. These inspectors invited us to a seat in their booth of leaves. We preferred, however, to ascend the mountain behind the village, which we found to be composed of basalt and lava. The barometer at the top at noon read 26.82, showing a height of 3,585 feet. The thickness of the trap at this point is therefore 835 feet. A fine view is obtained from Nebi Matta over the foot-hills, the great plain, and the sea. The top of the mountain is covered with bracken, *Pteris aquilina*, L. There are springs almost at the summit. Nearly the whole of the northern part of the range can be seen from Nebi Matta, owing to the fact that it is situated on a branch ridge, at some distance to the west of the main chain.

After spending half an hour on the summit we came down to the booth and partook of a lunch of squash and cracked wheat stewed in lebbeh. Our train had not yet appeared, having, as it subsequently transpired, met with many detentions and some mishaps in getting up the steep and rugged roads. In fact the limestone ranges are far more rugged than those of most of Lebanon and Anti-Lebanon, and wholly impassable except along the roads, which are none of the best. After waiting a couple of hours at el-Bireh, we left word for our train to follow us to el-Meshta, where we proposed to spend Sunday. Three-quarters of an hour



Sketch-map
and Plain of 'Akl



Sketch-map showing the relative positions of the trap and limestone of the southern Nusairiy chain, and the Hems plateau, and Plain of 'Akkar.

///≡/// Limestone.

*** Trap.



from el-Bireh we passed 'Ain-Shems, and then turning sharply to the left skirted a hill for five minutes, and then turned sharply to the right and over the hill. Thirty minutes more brought us to *el-Basrah*, and fifty more to *el-Jemineh*. From this village we made a plunge of ten minutes into the valley. Several mountain nymphs were bathing in the cold stream which flowed from the copious fountain by the roadside. Another ascent of ten minutes brought us to the Greek-Christian village of *el-Meshta*, or more fully, *Meshta-Beit-el-Helu* (*i.e.*, the winter quarters of the Helu family). We were received with characteristic Oriental hospitality.

Between el-Bireh and 'Ain-Shems we found *Rubus coccineus*, L. (new for Syria). The distance from el-Bireh to el-Meshta was two-and-a-half hours. The barometer at el-Meshta at 4½ p.m. read 28.5, height, 1,850 feet. Our train did not arrive until sunset.

Sunday, August 3.—By invitation of our host we held divine service in the morning under a fine plane tree, in the open plaza before the house. Two of the Greek priests were present at the service. Most of the day was spent in attendance on the sick, many of whom flocked in from the villages around. As the house is a specimen of many mansions of country squires, it may be well to describe it.

In the centre is a large quadrangular court open to the sky, the floor sloping from the upper end (where there is a plashing jet of cold mountain water playing into a limestone basin 6 feet in diameter) to the lower, where is the entrance through a passage leading out to the plaza. All around this court are square chambers, with floors of beton, ceilings of unpainted wood, and rude mulberry doors and windows, the latter unglazed. A flock of ducks, turkeys, and fowls, go at their pleasure through the muddy court, intrude into the rooms, or stray outside. The roofs of the chambers are flat, earth terraces, rolled in wet weather, to make the earth compact enough to shed rain. On either side of the vaulted entrance are stables and offices. Under the plane tree and around the plaza are divans of stone and wood, and on one side a large tank, in which quacking ducks and shouting boys dispute the enjoyment of the water. The whole village consists of the houses of the family or those of their tenants, and all the surrounding hills and valleys are the domain of the still wealthy, though reduced, family of el-Helu.

Monday, August 4.—It was with a sentiment of regret that we left the hospitable friends with whom we had passed two pleasant days. As we went out of the village Mr. Day took the dip of the limestone strata, 17° W. Our road lay at first due east, over the rugged limestone ridge.

Half an hour from el-Meshta we passed through the village of *el-Uyûn*, and half an hour farther on through *el-Juweikhât*. On our way we collected *Teucrium Creticum*, L., and *Salvia grandiflora*, Ettl. We passed through scrubs of *Quercus coccifera*, L., and *Pistacia Palaestina*, Baiss., but no forests. El-Juweikhât is a most picturesque village, built on three hills facing each other, and surmounted with rugged eminences dotted

over with scrubs and bushes. From el-Juweikhât we turned eastward and descended by easy grades to *Ard-el-Remthah*, a fertile valley through the last of the limestone ridges. Half an hour from el-Juweikhât we came upon a noble oak grove, overshadowing a Nusairy tomb. We stopped for a few minutes to rest in the welcome shade, and then rode westward up the easy slope of the north and south trap range. At the base of it we found *Johrenia juncea*, Boiss., a plant heretofore found only on the flanks of Hermon. The almost leafless stems are as high as a man on horseback. A rosette of much dissected leaves is found during the flowering stage at the neck of the plant. As soon as we had breasted the ascent we obtained an extensive view of the southern end of the range. The ridge on which we were overlooks the upper valley of the Nahr-el-Kebîr, and is *vis-à-vis* with another parallel ridge of trap, which is in the direct north and south line of the Nusairy chain. We followed up the ridge to its northern extremity, which is also its highest point. Unfortunately, we neglected to take the reading of the barometer there. But it cannot be lower than el-Birch. From this commanding point of view, overlooking the bay south of Shumeisêh, which divides the trap from the limestone, the sketch map of the southern end of the plain was made. All the ridges given in the map are in plain view from this point, as they could not be from any other. The opposite ridge to the east, however, cut off the view of the Orontes table-land.

On the top of the ridge we collected *Papaver Syriacum*, Boiss. After sketching the map we turned southward, and passing through a Nusairy village, of which we did not take the name, made our way down into the valley of the Nahr-el-Kebîr. In an oak grove half way down we found *Herniaria glabra*, L. and *Lupinus pilosus*, L. We took our lunch on the threshing-floor of *el-Kaimeh*, overlooking the valley.

At 3 p.m. we had reached the bottom of the valley. There we met with a grove of *Quercus Lusitanica*, Lam. The Nahr-el-Kebîr makes a long sweep around the shoulder of the range on which Qal'at-el-Huṣn is situated, and then flows away to the west toward the sea. The Huṣn range trends east and west, parallel to the southern escarpment of the Nusairy chain, and separated from it by the valley in which the convent of Mar Giurgius is built. Here and there in this valley the limestone rock crops out, and the western part of the chain of el-Huṣn is also limestone. But el-Huṣn itself is built on volcanic rock. We rode up to it at 4 p.m. The barometer stood at 28 : height, 2,325 feet. From el-Huṣn we rode down to the convent of Mar Giurgius, and then back again over the Huṣn ridge, through the village of 'Amâr to Tell Kelakh, which we reached at 8 p.m. We collected on the way *Teucrium procerum*, Boiss., *Hippomarathrum crispum*, Pers., *Johrenia juncea*, Boiss.

Tel Kelakh is a village belonging to a wealthy family, at the head of which is Asaad Pacha, whose house is twenty minutes east of the village. It is the half-way station of the Tripoli-Hems Chaussée. The Pacha is a former patient of the writer and a warm friend. He was unfortunately absent at the time of our visit. Nevertheless, his relatives

showed us hospitality in his behalf by inviting us to supper with them, and by supplying all our troop with barley without charge.

Tuesday, August 5.—After posting a letter at the station we took up our route near the *chaussée*, which follows very nearly the old Roman road. We crossed the Nahr-el-Kebîr by the Jisr Sheikh 'Ayyash, called also *Jisr-el-Jidd*, and then skirted the 'Akkâr plain, passing through *Daria* and *Qanvitrah* to *Halbeh*, the seat of government, for the plain of 'Akkâr. The southern end of the great trap dyke is near Halbeh, and its western border loses itself gradually in the maritime plain.

Our way from Halbeh led us for an hour over the new carriage road to Tripoli, through 'Arqa and past Khan-el-Quleîât. A sharp turn to the left, and an ascent of an hour into the limestone foothills, brought us at 5½ p.m. to Bibnîn, a flourishing village, inhabited by a mixed population of Mohammedans and Christians. During the whole of this day we found little of botanical interest. The figtrees of Bibnîn are remarkable for their symmetrical growth and large size, and the figs rival those of Smyrna.

(*To be continued in April "Quarterly Statement."*)

ON THE STRENGTH OR PRESSURE OF THE WIND AT SARONA, RECORDED DAILY BY HERR DREHER IN THE TEN YEARS 1880 TO 1889.

By JAMES GLAISHER, F.R.S.

THE strength of the wind has been estimated on the scale of 0 to 6, a calm being represented by 0, and a gale by 6. On such a scale the square of the estimated numbers corresponds approximately to pounds pressure on the square foot: for instance, if the estimated strength be 1, 2, or 3, the corresponding pressure of the wind on the square foot are approximately 1 lb., 4 lbs., or 9 lbs. respectively. The numbering of the tables is in continuation of those on the direction of the wind in the same years, published in the *Quarterly Statement* in the number for July 1892.

TABLE XVIII.—Showing the average estimated force of the wind at Sarona during the month of January in each year, 1880 to 1889, referred to eight points of the azimuthal circle, at 9 a.m. :—

Years.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Number of days of calm.
1880 ... ..	...	0·6	0·5	0·7	1·1	2·3	...	0·5	2
1881 ... ..	...	0·5	0·5	0·5	1·1	0·5	1·0	...	3
1882 ... ..	...	0·9	0·8	0·5	1·0	2·0	...	1·0	7
1883	1·6	0·5	0·5	0·9	1·1	1·6	0·8	...	2
1884 ... ..	...	0·5	0·5	0·6	1·4	0·5	5·0	4·5	7
1885	1·3	1·0	1·5	...	2·0	2·0	...	0·8	9
1886	0·5	0·5	0·5	0·6	1·3	...	...	5·0	9
1887	0·7	1·5	1·0	1·0	1·4	4·3	3·0	1·5	9
1888 ... ..	...	1·0	0·5	0·5	1·0	2·3	...	0·8	9
1889 ... ..	...	0·5	1·1	1·0	1·1	1·5	0·5	1·3	4

From this table we see that in January no air passed from the north in six out of the ten years; none from the south-east in 1885; from the south-west in 1886; from the west in 1880, 1882, 1885, 1886, and 1888; and from the north-west in 1881 and 1883.

The strongest average estimated forces of wind in January were—

In 1880 ... ..	...	...	...	S.W. 2·3 and S. 1·1.
1881 ... ..	...	...	...	S. 1·1 „ W. 1·0.
1882 ... ..	...	...	...	S.W. 2·0 „ S. and W. 1·0.
1883 ... ..	...	...	...	S.W. 1·6 „ N. 1·6.
1884 ... ..	...	...	...	N.W. 4·5 „ S. 1·4.
1885 ... ..	...	...	...	S. 2·0 „ S.W. 2·0.
1886 ... ..	...	...	...	N.W. 5·0 „ S. 1·3.
1887 ... ..	...	...	...	S.W. 4·3 „ W. 3·0.
1888 ... ..	...	...	...	S.W. 2·3 „ S. and N.E. 1·0.
1889 ... ..	...	...	...	S.W. 1·5 „ N.W. 1·3.

Therefore, the—

S.W. wind has been strongest in five years, viz., 1880, 1882, 1887, 1888, and 1889.

N.W. „ „ „ two years, viz., 1884 and 1886.

S. „ „ „ one year „ 1881.

In 1883 the south-west and north winds were of equal strength.

In 1885 the south and south-west winds were of equal strength.

The numbers in the last column show the number of days of calm in each January in the ten years at 9 a.m. The largest number is 9 in the

years 1885 to 1888 ; and the smallest number is 2 in the years 1880 and 1883. The average number is 6·1.

TABLE XIX.—Showing the average estimated force of the wind at Sarona during the month of February in each year, 1880 to 1889, referred to eight points of the azimuthal circle, at 9 a.m. :—

Years.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Number of days of calm.
1880 ... ..	...	1·2	1·5	0·7	0·5	1·4	1·5	...	7
1881	0·5	1·0	...	0·5	1·8	2·1	3·0	...	2
1882	1·5	0·7	0·9	0·5	1·6	1·3	1·0	2·5	1
1883	2·0	0·8	0·5	0·6	1·3	1·6	...	...	9
1884	0·5	0·7	...	0·5	1·4	...	3·0	3·5	6
1885	1·2	0·5	...	0·5	0·8	0·5	...	0·5	16
1886	0·5	0·5	1·3	0·6	1·2	1·7	1·5	...	5
1887	2·0	...	1·0	0·5	1·2	1·5	2·5	0·5	15
1888	1·0	...	0·5	0·5	0·9	1·2	1·0	...	7
1889 ... ..	...	...	...	0·7	1·2	1·5	1·0	...	8

From this table we see that in February no air passed from the north in 1880 and 1889 ; none from the north-east in 1887, 1888, and 1889 ; from the east in four years out of the ten ; from the south-west in 1884 ; from the west in 1883 and 1885 ; and from the north-west in 1880, 1881, 1883, 1886, 1888, and 1889.

The strongest average estimated forces of wind in February were—

In 1880	....	....	....	E. 1·5 and W. 1·5.
1881	....	....	....	W. 3·0 „ S.W. 2·1.
1882	....	....	....	N.W. 2·5 „ S. 1·6.
1883	....	....	....	N. 2·0 „ S.W. 1·6.
1884	....	....	....	N.W. 3·5 „ W. 3·0.
1885	....	....	....	N. 1·2 „ S. 0·8.
1886	....	....	....	S.W. 1·7 „ W. 1·5.
1887	....	....	....	W. 2·5 „ N. 2·0.
1888	....	....	....	S.W. 1·2 „ N. and W. 1·0.
1889	....	....	....	S.W. 1·5 „ S. 1·2.

Therefore, the—

S.W. wind has been strongest in three years, viz., 1886, 1888, and 1889.

W.	„	„	„	two years, viz., 1881 and 1887.
N.W.	„	„	„	two „ „ 1882 „ 1884.
N.	„	„	„	two „ „ 1883 „ 1885.

In 1880 the east and west winds were of equal strength.

The numbers in the last column show the number of days of calm in each February in the ten years at 9 a.m. The largest number is 10 in the year 1885; and the smallest number is 1 in 1882. The average number is 7·6.

TABLE XX. — Showing the average estimated force of the wind at Sarona during the month of March in each year, 1880 to 1889, referred to eight points of the azimuthal circle, at 9 a.m. :—

Years.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Number of days of calm.
1880	0·5	0·5	0·5	0·9	1·0	1·0	2·8	0·8	7
1881	1·0	0·8	0·5	0·8	0·5	2·0	2·0	1·3	4
1882 ... ..	...	...	0·5	1·9	0·7	0·6	0·8	...	9
1883	0·5	...	...	...	0·7	1·8	2·3	...	16
1884	0·5	0·5	0·5	0·5	0·6	1·4	1·1	0·5	5
1885 ... ..	...	...	...	0·5	0·5	1·3	0·8	0·5	16
1886 ... ..	...	0·5	0·5	0·5	1·1	1·4	0·5	0·9	6
1887	1·5	0·5	1·7	0·7	0·8	1·2	2·0	1·0	12
1888	0·5	0·7	2·5	1·1	1·3	1·6	1·8	1·5	5
1889	0·8	0·5	...	2·0	0·8	2·3	1·0	1·5	8

From this table we see that in March no air passed from the north in 1882, 1885, and 1886; none from the north-east in 1882, 1883, and 1885; from the east in 1883, 1885, and 1889; from the south-east in 1883; and from the north-west in 1882 and 1883.

The strongest average estimated forces of wind in March were—

In 1880	....	....	....	W. 2·8 and S. and S.W. 1·0.
1881	....	....	....	S.W. 2·0 „ W. 2·0
1882	....	....	....	S.E. 1·9 „ W. 0·8.
1883	....	....	....	W. 2·3 „ S.W. 1·8.
1884	....	....	....	S.W. 1·4 „ W. 1·1.
1885	....	....	....	S.W. 1·3 „ W. 0·8.
1886	....	....	....	S.W. 1·4 „ S. 1·1.
1887	....	....	....	W. 2·0 „ E. 1·7.
1888	....	....	....	E. 2·5 „ W. 1·8.
1889	....	....	....	S.W. 2·3 „ S.E. 2·0.

Therefore, the—

S.W. wind has been strongest in four years, viz., 1884, 1885, 1886, and 1889.

W. „ „ „ three years, viz., 1880, 1883, and 1887.

S.E. „ „ „ one year, viz., 1882.

E. „ „ „ one „ „ 1888.

In 1881 the south-west and west winds were of equal strength.

The numbers in the last column show the number of days of calm in each March in the ten years at 9 a.m. The largest number is 16 in both the years 1883 and 1885, and the smallest number is 4 in the year 1881. The average is 8·8.

TABLE XXI.—Showing the average estimated force of the wind at Sarona during the month of April in each year, 1880 to 1889, referred to eight points of the azimuthal circle, at 9 a.m. :—

Years.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Number of days of calm.
1880 ...	...	...	...	0·5	1·3	1·4	1·2	0·8	6
1881 ...	2·0	...	...	1·5	0·9	1·0	2·1	0·8	4
1882 ...	0·5	...	...	1·0	0·5	1·8	0·7	0·5	6
1883 ...	...	...	...	...	0·8	0·8	0·8	0·5	13
1884 ...	...	0·6	1·5	1·0	2·0	0·9	2·6	0·5	6
1885 ...	...	...	...	...	1·0	1·6	1·2	...	15
1886 ...	0·8	...	...	...	...	1·7	0·6	0·6	11
1887 ...	...	0·6	1·3	...	1·5	2·0	1·3	0·5	10
1888 ...	...	...	0·5	0·5	0·9	2·0	1·7	0·5	5
1889 ...	0·5	...	...	0·5	1·1	1·2	1·1	0·6	8

From this table we see that in April no air passed in several years from the north, north-east, east, and south east; none from the south in 1886, and from the north-west in 1885.

The strongest average estimated forces of wind in April were—

In 1880	...	...	...	S.W. 1·4 and S. 1·3
1881	...	...	...	W. 2·1 „ N. 2·0.
1882	...	...	...	S.W. 1·8 „ S.E. 1·0
1883	...	...	...	S. 0·8 „ S.W. and W. 0·8.
1884	...	...	...	W. 2·6 „ S. 2·0.
1885	...	...	...	S.W. 1·6 „ W. 1·2.
1886	...	...	...	S.W. 1·7 „ N. 0·8.
1887	...	...	...	S. 1·5 „ E. and W. 1·3.
1888	...	...	...	S.W. 2·0 „ W. 1·7.
1889	...	...	...	S.W. 1·2 „ S. and W. 1·1.

Therefore, the—

S.W. wind has been strongest in six years, viz., 1880, 1882, 1885, 1887, 1888, and 1889.

W. " " " two years, viz., 1881 and 1884.

S. " " " one year, " 1887.

In 1883 the south, south-west, and west winds were of equal strength.

The numbers in the last column show the number of days of calm in each April in the ten years at 9 a.m. The largest number is 18 in the year 1883; and the smallest 4 in the year 1881. The average number is 8.9.

TABLE XXII.—Showing the average estimated force of the wind at Sarona during the month of May in each year, 1880 to 1889, referred to eight points of the azimuthal circle, at 9 a.m. :—

Years.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Number of days of calm.
1880 ... ..	...	0.7	0.5	...	...	0.9	1.2	0.5	5
1881	1.0	0.5	3.0	...	...	1.2	0.6	0.7	4
1882	0.5	...	0.5	...	0.5	1.2	0.6	0.6	...
1883	0.5	0.5	...	...	...	0.6	0.5	0.5	17
1884	1.0	...	...	...	0.5	1.1	0.8	0.6	2
1885	5.0	...	...	0.5	...	1.0	0.7	0.5	10
1886	0.8	0.5	...	...	1.3	1.1	0.7	0.5	2
1887	0.5	...	...	...	1.1	0.8	0.6	0.8	6
1888	1.5	...	0.5	...	...	1.4	0.9	0.5	1
1889	0.8	...	1.5	0.5	...	1.1	0.8	0.5	7

From this table we see that in May no air passed from the north in 1880; none from the north-east, in 1882, 1884, 1885, 1887, 1888, and 1889; from the east in 1883, 1884, 1885, 1886, and 1887; from the south-east in the years 1880-1884, and 1886-1888; and from the south, in 1880, 1881, 1883, 1885, 1888, and 1889.

The strongest average estimated forces of wind in May were—

In 1880	....	....	W. 1.2 and S.W. 0.9.
1881	....	....	E. 3.0 " S.W. 1.2.
1882	....	....	S.W. 1.2 " W. and N.W. 0.6.
1883	....	....	S.W. 0.5 " N., N.E., W., and N.W. 0.5
1884	....	....	S.W. 1.1 " N. 1.0.
1885	....	....	N. 5.0 " S.W. 1.0.
1886	....	....	S. 1.3 " S.W. 1.1.
1887	....	...	S. 1.1 " S.W. and N.W. 0.8.
1888	....	....	N. 1.5 " S.W. 1.4.
1889	....	....	E. 1.5 " S.W. 1.1.

Therefore, the—

S.W. wind has been strongest in two years, viz., 1882 and 1884.

S. " " " two " 1886 " 1887.

E. " " " two " 1881 " 1889.

N. " " " two " 1885 " 1888.

W. " " " one year " 1880.

In 1883 the south-west, north, north-east, west, and north-west winds were of equal strength.

The numbers in the last column show the number of days of calm in each May in the 10 years at 9 a.m. The largest number is 17 in 1883; while in the year 1882 there is no instance of a calm reported in this month. The average number is 5·4.

TABLE XXIII.—Showing the estimated average force of the wind at Sarona during the month of June in each year, 1880 to 1889, referred to eight points of the azimuthal circle, at 9 a.m. :—

Years.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Number of days of calm.
1880 ... ..	...	...	...	...	...	1·1	1·0	0·7	1
1881	0·5	0·5	...	...	...	0·9	0·7	0·9	3
1882	1·0	...	0·5	...	0·5	0·9	0·7	0·5	...
1883 ... ..	...	0·5	0·5	0·5	...	0·8	0·8	0·5	14
1884	1·0	0·5	...	...	...	1·2	0·9	0·7	3
1885 ... ..	...	...	0·5	0·5	0·5	1·6	0·6	1·3	3
1886	0·2	0·5	...	...	1·0	0·8	0·8	0·5	1
1887 ... ..	...	...	...	...	1·0	1·0	0·8	1·0	2
1888 ... ..	...	...	...	...	...	1·0	0·8	1·4	2
1889 ... ..	...	...	...	0·5	0·7	0·9	0·7	0·8	7

From this table we see that in June no air passed from the north or north-east in six years out of the ten; none from either the east or south-east in seven years out of the ten; and none from the south in 1880, 1881, 1883, 1884, and 1888.

The strongest average estimated forces of wind in June were—

In 1880	....	....	....	S.W. 1·0 and W. 1·0.
1881	....	....	....	S.W. 0·9 „ N.W. 0·9.
1882	....	....	....	N. 1·0 „ S.W. 0·9.
1883	....	....	....	S.W. 0·8 „ W. 0·8.
1884	....	....	....	S.W. 1·2 „ N. 1·0.
1885	....	....	....	S.W. 1·6 „ N.W. 1·3.
1886	....	....	....	S. 1·0 „ S.W. and W. 0·8.
1887	....	....	....	S. 1·0 „ S.W. „ N.W. 1·0.
1888	....	....	....	N.W. 1·4 „ S.W. 1·0.
1889	....	....	....	S.W. 0·9 „ N.W. 0·8.

Therefore, the—

S.W. wind has been strongest in three years, viz., 1884, 1885, and 1889.

S. „ „ one year, viz., 1886.

N. „ „ one „ „ 1882.

N.W. „ „ „ one „ „ 1888.

In 1880 and 1883 the south-west and west winds were of equal strength.

In 1881 the south-west and north-west winds were of equal strength.

In 1887 the south, south-west, and north-west winds were of equal strength.

The numbers in the last column show the number of days of calm in each June in the ten years at 9 a.m. The largest number is 14 in the year 1883; while in the year 1882 there is no instance of a calm reported in this month. The average number is 3·6.

TABLE XXIV. —Showing the average estimated force of the wind at Sarona during the month of July in each year, 1880 to 1889, referred to eight points of the azimuthal circle, at 9 a.m. :—

Years.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Number of days of calm.
1880	0·7	0·5	0·8	1
1881	1·0	0·9	0·5	1
1882	0·5	...	...	0·9	1·5	0·5	...
1883	0·8	0·7	...	3
1884	0·8	0·7	...	2
1885	1·2	0·7	1·0	1
1886	1·0	0·8	0·7	2
1887	0·8	0·5	...	2
1888	0·8	0·6	0·8	6
1889	0·5	0·5	1·6	0·8	...	6

Nearly all the air in this month passed from the south-west, west, and north-west.

The strongest average estimated forces of wind in July were—

In 1880	....	....	....	N.W. 0·8	and	S.W. 0·7.
1881	....	....	....	S.W. 1·0	„	W. 0·9.
1882	....	....	....	W. 1·5	„	S.W. 0·9.
1883	....	....	....	S.W. 0·8	„	W. 0·7.
1884	....	....	....	S.W. 0·8	„	W. 0·7.
1885	....	....	....	S.W. 1·2	„	N.W. 1·0.
1886	....	....	....	S.W. 1·0	„	W. 0·8.
1887	....	....	....	S.W. 0·8	„	W. 0·5.
1888	....	....	....	S.W. 0·8	„	N.W. 0·8.
1889	....	....	....	S.W. 1·0	„	W. 0·8.

Therefore, the—

S.W. wind has been strongest in seven years, viz., 1881, 1883, 1884
1885, 1886, 1887, and 1889.

W. „ „ „ one year, viz., 1882.

N.W. „ „ „ one „ „ 1880.

In 1888 the south-west and north-west winds were of equal strength.

The numbers in the last column show the number of days of calm in each July in the ten years at 9 a.m. The largest number is 6 in both the years 1888 and 1889; while in 1882 there is no instance of a calm reported in this month. The average number is 2·4.

TABLE XXV.—Showing the average estimated force of the wind at Savona during the month of August in each year, 1880 to 1889, referred to eight points of the azimuthal circle, at 9 a.m. :—

Years.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Number of days of calm.
1880	0·7	0·5	0·5	7
1881	0·5	0·9	0·8	0·5	...	1
1882	0·5	...	0·5	...	0·5	0·6	0·6	0·6	...
1883	0·7	0·6	0·5	12
1884	0·5	1·0	0·9	0·6	5
1885	1·0	1·2	0·8	0·7	4
1886	0·5	1·0	0·9	0·6	2
1887	0·5	1·0	0·8	1·0	4
1888	0·5	0·8	0·6	0·5	7
1889	0·5	0·5	0·7	1·0	...	4

From this table we see that in August very little air passed in the ten years from the north, north-east, and south-east; no air passed from

the south in 1880 and 1882 ; and none passed from the north-west in 1881 and 1889.

The strongest average estimated forces of wind in August were—

In 1880	....	....	....	S.W. 0·7 and W. and N.W. 0·5.
1881	....	....	....	S. 0·9 „ S.W. 0·8.
1882	....	....	....	S.W. 0·6 „ W. and N.W. 0·6.
1883	....	....	....	S.W. 0·7 „ W. 0·6.
1884	....	....	....	S.W. 1·0 „ W. 0·9.
1885	....	....	....	S.W. 1·2 „ S. 1·0.
1886	....	....	....	S.W. 1·0 „ W. 0·9.
1887	....	....	....	S.W. 1·0 „ N.W. 1·0.
1888	....	....	....	S.W. 0·8 „ W. 0·6.
1889	....	....	....	W. 1·0 „ S.W. 0·7.

Therefore, the—

S.W. wind has been strongest in six years, viz., 1880, 1883, 1884, 1885, 1886, and 1888.

S. „ „ one year, viz., 1881.

W. „ „ one „ „ 1889.

In 1882 the south-west, west, and north-west winds were of equal strength.

In 1887 the south-west and north-west winds were of equal strength.

The numbers in the last column show the number of days of calm in each August in the ten years at 9 a.m. The largest number is 12 in the year 1883, while in 1882 there is no instance of a calm reported in this month. The average number is 4·6.

TABLE XXVI.—Showing the average estimated force of the wind at Sarona during the month of September in each year, 1880 to 1889, referred to eight points of the azimuthal circle, at 9 a.m. :—

Years.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Number of days of calm.
1880 ... ..	...	1·2	...	0·5	0·5	0·9	0·6	0·9	2
1881 ... ..	...	0·5	...	0·5	...	0·5	0·8	0·8	9
1882	0·5	...	...	...	0·5	0·7	0·6	0·5	3
1883	1·2	...	...	...	...	0·6	...	0·5	14
1884	0·8	0·5	...	...	1·0	0·9	0·6	0·5	5
1885	0·5	...	...	...	...	0·9	0·6	0·5	12
1886	1·2	0·5	...	...	0·7	1·2	1·0	0·7	3
1887	0·5	...	...	...	...	1·0	0·8	0·5	8
1888	1·0	...	...	...	0·5	0·6	0·8	0·7	10
1889 ... ..	...	1·5	...	...	1·3	0·8	0·6	1·0	9

From this table we see that in September no air passed from the north in 1880, 1881, and 1889 ; none passed from the north-east in 1882, 1883, 1885, 1887, and 1888 ; none from the east during the ten years ; from the south-east from 1882 to 1889 ; from the south in 1881, 1883, 1885, and 1887 ; and from the west in 1883.

The strongest average estimated forces of wind in September were—

In 1880	....	....	....	N.E. 1·2	and	S.W. and N.W. 0·9.
1881	....	....	....	W. 0·8	„	N.W. 0·8.
1882	....	....	....	S.W. 0·7	„	W. 0·6.
1883	....	....	....	N. 1·2	„	S.W. 0·6.
1884	....	....	....	S. 1·0	„	S.W. 0·9.
1885	....	....	....	S.W. 0·9	„	W. 0·6.
1886	....	....	....	S.W. 1·2	„	N. 1·2.
1887	....	....	....	S.W. 1·0	„	W. 0·8.
1888	....	....	....	W. 0·8	„	N.W. 0·7.
1889	....	....	....	N.E. 1·5	„	S. 1·3.

Therefore, the—

S.W. wind has been strongest in three years, viz., 1882, 1885, and 1887.

N.E.	„	„	„	two	„	„	1880 and 1889.
S.	„	„	„	one year	„	„	1884.
W.	„	„	„	one	„	„	1888.
N.	„	„	„	one	„	„	1883.

In 1881 the west and north-west winds were of equal strength.

In 1886 the south-west and north winds were of equal strength.

The numbers in the last column show the number of days of calm in each September in the ten years at 9 a.m. The largest number is 14 in the year 1883, and the smallest number is 2 in the year 1880. The average number is 7·5.

TABLE XXVII.—Showing the average estimated force of the wind at Sarona during the month of October in each year, 1880 to 1889, referred to eight points of the azimuthal circle, at 9 a.m. :—

Years.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Number of days of calm.
1880	1·3	0·5	...	0·5	1·0	0·7	2·3	0·5	10
1881	0·8	0·7	...	0·5	1·8	0·8	0·5	1·0	7
1882	0·6	...	1·5	1·3	...	1·2	0·5	0·8	6
1883	1·0	0·5	0·8	...	0·8	0·7	2·0	...	18
1884	0·5	0·5	...	0·5	0·9	0·7	...	0·5	13
1885 ... ..	...	2·0	3·5	4·0	0·6	...	1·5	0·5	20
1886	0·5	...	4·5	0·5	1·4	1·3	...	0·5	14
1887 ... ..	...	0·5	0·5	0·5	0·5	1·0	0·5	0·5	11
1888	0·5	...	1·0	1·5	0·8	0·5	0·5	0·8	15
1889	0·5	...	1·5	...	0·7	0·5	0·5	0·5	17

From this table we see that in October no air passed from the north in 1885 and 1887 ; none passed from the north-east in 1882, 1886, 1888, and 1889 ; from the east in 1880, 1881, and 1883 ; from the south-east in 1883 and 1889 ; from the south in 1882 ; from the south-west in 1885 ; from the west in 1884 and 1886 ; from the north-west in 1883.

The strongest average estimated forces of wind in October were—

In 1880	....	....	....	W. 2·3 and N. 1·3.
1881	....	....	....	S. 1·8 „ N.W. 1·0.
1882	....	....	....	S.E. 1·8 „ E. 1·5.
1883	....	....	....	W. 2·0 „ N. 1·0
1884	....	....	....	S. 0·9 „ S.W. 0·7.
1885	....	....	....	S.E. 4·0 „ E. 3·5.
1886	....	....	....	E. 4·5 „ S. 1·4.
1887	....	....	....	S.W. 1·0 „ N.E., E., S.E., S., W. and N.W. 0·5.
1888	....	....	....	S.E. 1·5 „ E. 1·0.
1889	....	....	...	E. 1·5 „ S. 0·7.

Therefore the—

S.E. wind has been strongest in three years, viz., 1882, 1885, and 1888.

S.	„	„	„	two	„	„	1881 and 1884.
W.	„	„	„	two	„	„	1880 „ 1883.
E.	„	„	„	two	„	„	1886 „ 1889.
S.W.	„	„	„	one year	„	„	1887.

The numbers in the last column show the number of days of calm in each October in the ten years at 9 a.m. The largest number is 18 in the year 1883, and the smallest number is 6 in the year 1882. The average number is 13·1.

TABLE XXVIII.—Showing the average estimated force of the wind at Sarona during the month of November in each year, 1880 to 1889, referred to eight points of the azimuthal circle, at 9 a.m. :—

Years.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Number of days of calm.
1880 ... ..	...	0·5	3·2	0·6	1·8	1·4	...	...	11
1881 ... ..	...	0·5	2·2	0·6	1·3	1·8	...	0·5	4
1882	1·0	0·7	0·7	6·8	...	0·8	...	...	6
1883 ... ..	...	...	3·0	0·5	1·0	4·0	0·5	...	11
1884	1·0	...	...	0·5	1·1	...	2·0	0·5	13
1885 ... ..	...	...	...	0·5	1·2	4·0	...	...	20
1886 ... ..	...	...	...	...	1·5	1·0	1·2	...	16
1887 ... ..	...	0·6	0·5	0·7	0·8	1·5	...	1·0	11
1888 ... ..	...	0·6	0·5	0·5	0·5	2·5	0·5	...	6
1889	0·5	1·0	0·5	0·5	1·5	1·3	...	...	14

From this table we see that in November no air passed from the north in seven years out of the ten ; none from the north-east from 1883 to 1886 ; from the east from 1884 to 1886 ; from the south-east in 1886 ; from the south in 1882 ; from the south-west in 1884 ; from the west in six years out of the ten ; and from the north-west in seven years out of the ten.

The strongest average estimated forces of wind in November were—

In 1880	....	....	....	E. 3·2 and S. 1·8.
1881	....	....	....	E. 2·2 „ S.W. 1·8.
1882	....	....	....	N. 1·0 „ S.E. and S.W. 0·8.
1883	....	....	....	S.W. 4·0 „ E. 3·0.
1884	....	....	....	W. 2·0 „ S. 1·1.
1885	....	....	....	S.W. 4·0 „ S. 1·2.
1886	....	....	....	S. 1·5 „ W. 1·2.
1887	....	....	....	S.W. 1·5 „ S. 0·8
1888	....	....	....	S.W. 2·8 „ W. 0·8.
1889	....	....	....	S. 1·5 „ S.W. 1·3.

Therefore, the—

S.W. wind has been strongest in four years, viz., 1883, 1885, 1887, and 1888.

S.	"	"	two	"	"	1886 and 1889.
E.	"	"	two	"	"	1880 " 1881.
W.	"	"	one year	"	"	1884.
N.	"	"	one	"	"	1882.

The numbers in the last column show the number of days of calm in each November in the ten years at 9 a.m. The largest number is 20 in the year 1885; and the smallest number is 4 in the year 1881. The average number is 11·2.

TABLE XXIX.—Showing the average estimated force of the wind at Sarona during the month of December in each year, 1880 to 1889, referred to eight points of the azimuthal circle, at 9 a.m. :—

Years.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Number of days of calm.
1880 ... ..	...	0·7	0·5	0·8	1·5	2·0	4·0	...	3
1881 ... ..	...	0·7	0·5	0·5	1·1	...	1·0	...	2
1882	0·5	0·5	0·5	0·6	...	1·2	0·9	...	9
1883 ... ..	...	0·5	2·0	0·8	1·3	0·5	...	...	7
1884 ... ..	...	0·6	0·5	1·0	1·0	...	...	0·5	16
1885 ... ..	...	1·0	1·0	0·8	1·5	...	4·0	0·5	4
1886	1·5	...	...	...	1·2	2·0	1·5	...	17
1887 ... ..	...	1·0	0·5	0·5	0·9	1·3	4·0	...	13
1888 ... ..	...	0·5	0·5	0·8	0·8	1·8	3·0	...	10
1889	0·5	0·5	0·7	1·0	1·0	2·0	...	...	8

From this table we see that in December no air passed in several years from the north or north-west; none from north-east, east, or south-east in 1886; from the south in 1882; from the south-west in 1881, 1884, and 1885; and from the west in 1883, 1884, and 1889.

The strongest average estimated forces of wind in December were—

In 1880	....	....	....	W. 4·0 and S.W. 3·0.
1881	....	....	....	S. 1·1 " W. 1·0.
1882	....	....	....	S.W. 1·2 " W. 0·9.
1883	....	....	....	E. 2·0 " S. 1·3.
1884	....	....	....	S.E. 1·0 " S. 1·0.
1885	....	....	....	W. 4·0 " S. 1·5.
1886	....	....	....	S.W. 2·0 " N. and W. 1·5.
1887	....	....	....	W. 4·0 " S.W. 1·3.
1888	....	....	....	W. 3·0 " S.W. 1·8.
1889	....	....	....	S.W. 2·0 " S. 1·2.

Therefore the—

W. wind has been strongest in four years, viz., 1880, 1885, 1887, and 1888.

S.W. " " three " " 1882, 1886, and 1889.

S. " " one year " 1881.

E. " " one " " 1883.

In 1884 the south-east and south winds were of equal strength.

The numbers in the last column show the number of days of calm in each December in the ten years at 9 a.m. The largest number is 17 in the year 1886; and the smallest number is 2 in the year 1881. The average number is 8·9.

The next, Table XXX, was formed by adding all the estimated strength of each direction of wind in each year together.

TABLE XXX.—Showing the yearly sums of the estimated force of the wind in each of the years 1880 to 1889, at Sarona, referred to eight points of the azimuthal circle :—

Years.				Sums of estimated force of Wind in each year.							
				N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
1880	...	...	...	3·1	21·0	16·5	28·5	39·0	111·5	58·5	20·5
1881	...	...	...	9·5	14·0	15·5	32·0	65·0	99·5	48·5	32·5
1882	...	...	...	11·0	8·5	18·0	24·0	38·5	121·0	43·0	16·0
1883	...	...	...	18·0	5·0	8·0	18·5	44·5	74·6	30·5	4·0
1884	...	...	...	8·5	11·5	7·0	15·5	64·0	69·0	63·5	26·0
1885	...	...	...	17·0	10·5	11·5	14·0	40·0	80·5	57·7	16·0
1886	...	...	...	13·7	3·0	8·5	6·0	80·0	80·3	59·0	32·0
1887	...	...	...	5·5	9·5	13·5	12·5	37·5	106·5	60·0	11·0
1888	...	...	...	6·0	7·0	9·0	16·5	46·0	110·0	59·5	24·5
1889	...	...	...	4·5	5·5	16·0	18·5	74·5	80·5	25·0	12·5
Sum	...	...	...	95·5	95·5	125·5	186·0	529·0	933·4	505·2	194·0

The numbers in this table under each direction of the wind differ very much from each other.

The N. wind numbered { 18·0 in 1883.
3·1 " 1880.

The N.E. " " { 21·1 " 1880.
3·0 " 1886.

The E. " " { 18·0 " 1882.
7·0 " 1884.

The S.E. wind numbered	{	32.0 in 1881.
		6.0 „ 1886.
The S. „ „	{	80.0 „ 1886.
		37.5 „ 1887.
The S.W. „ „	{	121.0 „ 1882.
		69.0 „ 1884.
The W. „ „	{	63.5 „ 1884.
		25.0 „ 1889.
The N.W. „ „	{	32.5 „ 1881.
		4.0 „ 1883.

The numbers at the foot of this table show the sum of all the estimated strengths of each wind for ten years. The largest is 933.4 under south-west; the next in order is 529 under south, and 505.2 under west. The smallest are 95.5 under north-east; the next in order, 96.8, under north, and 123.5, under east. At the foot of Table XIV the number of days of each wind for the ten years are given as follows: North, 106; north-east, 141; east, 114; south-east, 252; south, 179; south-west, 881; west, 530; and north-west, 267 days.

By dividing the numbers at the foot of Table XXX by these numbers the average estimated strength of each wind is found as follows:—

N. wind	0.9.	|	S. wind	1.1.
N.E. „	0.7.	|	S.W. „	1.1.
E. „	1.2.	|	W. „	1.0.
S.E. „	0.7.	|	N.W. „	0.8.

Thus the winds of strongest average force are east, south, and south-west.

Thus the winds of weaker average force are north-east, south-east, and north-west.

The numbers in Table XXX show the sums of the pressures of the wind in each year; in Table XIV the number of days that each wind has blown in each year is shown, and by dividing the numbers in Table XXX by the corresponding number in Table XIV, the next table showing the mean, or average force of each wind in each year, is shown.

TABLE XXXI.—Showing the average estimated force of the wind in each of the ten years ending 1889, at Sarona, referred to eight points of the azimuthal circle :—

Years.				Average estimated force of the Wind.							
				N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
1880	...	...	...	1.0	0.7	1.4	0.7	1.1	1.0	1.6	0.7
1881	...	...	...	1.1	0.7	1.4	0.6	1.2	1.0	1.2	2.5
1882	...	...	...	0.7	0.7	0.8	1.0	0.9	1.0	0.7	0.7
1883	...	...	...	1.2	0.6	1.1	0.7	1.0	1.0	0.8	0.1
1884	...	...	...	0.8	0.6	0.9	0.6	1.1	1.0	1.1	0.8
1885	...	...	...	1.5	1.1	1.6	0.9	1.1	1.3	0.8	0.7
1886	...	...	...	0.9	0.5	1.7	0.5	1.2	1.2	0.9	0.8
1887	...	...	...	0.7	0.7	1.1	0.7	1.0	1.1	1.0	0.7
1888	...	...	...	1.0	0.6	0.7	0.9	0.9	1.3	1.0	0.7
1889	...	...	...	0.4	0.6	0.9	0.8	1.2	0.9	0.7	0.6
Means	...	...	...	0.9	0.7	1.2	0.7	1.1	1.1	1.0	0.8

This table shows the average estimated force of the wind in each year, viz., 1880 to 1889 :—

In 1880 the largest estimated forces were—W. 1.6 and E. 1.4.
 „ smallest „ „ N.E., S.E., and N.W. 0.7.
 In 1881 the largest „ „ N.W. 2.5 and E. 1.4.
 „ smallest „ „ S.E. 0.6 and N.E. 0.7.
 In 1882 the largest „ „ S.E. and S.W. 1.0.
 „ smallest „ „ N., N.E., W., and N.W. 0.7.
 In 1883 the largest „ „ N. 1.2 and E. 1.1.
 „ smallest „ „ N.E. 0.6 and S.E. 0.7.
 In 1884 the largest „ „ S. and W. 1.1.
 „ smallest „ „ N.E. and S.E. 0.6.
 In 1885 the largest „ „ E. 1.6 and N. 1.5.
 „ smallest „ „ N.W. 0.7 and W. 0.8.
 In 1886 the largest „ „ E. 1.7 and S. and S.W. 1.2.
 „ smallest „ „ N.E. and S.E. 0.5.
 In 1887 the largest „ „ E. and S.W. 1.1.
 „ smallest „ „ N., N.E., S.E., and N.W. 0.7.
 In 1888 the largest „ „ S.W. 1.3 and N. and W. 1.0.
 „ smallest „ „ N.E. 0.6 and E. and N.W. 0.7.
 In 1889 the largest „ „ S. 1.2 and E. and S.W. 0.9.
 „ smallest „ „ N. 0.4 and N.E. and N.W. 0.6.

The numbers at the foot of the table show the average estimated force of wind from each direction in the ten years. The largest, 1·2, is from the east, the next in order is 1·1 from the south and south-west. The smallest is 0·7, from both the north-east and south-east, and these agree with those found from the totals in Table XXX.

By taking the sums of all the estimated strength of the wind in every month, in each direction for ten years, the following table is formed :—

TABLE XXXII.—Showing the sums of the estimated force of wind in every month in the ten years, 1880 to 1889, at Sarona, referred to eight points of the azimuthal circle :—

Months.	Sums of estimated force of wind in every month for ten years.								Sums.
	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	
January ...	17·0	19·0	17·5	31·0	116·0	42·5	12·0	24·5	270·5
February ...	13·5	13·0	9·5	27·5	86·0	58·0	24·5	7·5	299·5
March ...	4·0	7·5	11·5	31·0	53·5	62·0	59·5	13·0	282·5
April ...	7·5	5·0	7·5	12·0	39·0	85·5	77·2	16·5	280·2
May ...	16·5	4·0	9·5	1·5	9·0	80·0	59·0	34·5	214·0
June ...	3·7	2·0	2·0	1·5	6·0	104·0	76·5	33·0	228·7
July ...	0·0	0·0	2·0	0·5	0·5	152·3	67·5	7·0	220·8
August ...	0·5	0·0	0·5	2·0	10·0	127·6	53·5	14·0	208·1
September ...	13·5	6·5	0·0	1·0	12·5	86·0	27·0	20·5	167·0
October ...	12·6	8·5	26·5	19·5	27·5	41·0	16·0	19·0	170·6
November ...	2·5	12·5	23·5	20·5	74·0	55·5	7·5	3·5	199·5
December ...	5·5	17·5	13·5	38·0	95·0	39·0	25·0	1·0	234·5
Sums ...	96·8	95·5	123·5	186·0	329·0	923·1	505·2	191·0	2653·4

The sums of the estimated strength of each wind differ very much in the different months ; the extremes are as follows :—

The N. wind has the largest number in January and May.

N.	„	smallest	„	August and November.
N.E.	„	largest	„	January and December.
N.E.	„	smallest	„	May and June.
E.	„	largest	„	October and November.
E.	„	smallest	„	June, July, and August.
S.E.	„	largest	„	December, January, and March.

S.E. wind has the smallest number in July and September.				
S.	„	largest	„	January and December.
S.	„	smallest	„	July and June.
S.W.	„	largest	„	July and August.
S.W.	„	smallest	„	December and October.
W.	„	largest	„	April and June.
W.	„	smallest	„	November and January.
N.W.	„	largest	„	May and June.
N.W.	„	smallest	„	December and November.

No air passed from the north or east in July in the ten years.

No air passed from the north-east in August in the ten years.

No air passed from the east in September in the ten years.

Table XVI shows the number of days in every month in the ten years, and corresponds to Table XXXII, showing the sum of all the estimated force of the wind in each month. The following table, showing the average force of each wind in every month, has been formed by dividing the numbers in Table XXXII by those in Table XVI:—

TABLE XXXIII.—Shows the average estimated force of the wind in each direction in every month for the ten years, 1880 to 1889, at Sarona, referred to eight points of the azimuthal circle:—

Months.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Number of days of calm.
January ...	1.2	0.8	0.7	0.7	1.2	1.9	1.7	1.8	61
February ...	1.1	0.8	0.9	0.6	1.3	1.6	1.9	1.5	76
March ...	0.4	0.5	1.0	1.1	1.0	1.3	1.7	0.8	88
April... ..	1.1	0.6	1.3	1.0	1.1	1.5	1.3	0.6	89
May	1.2	0.6	1.4	0.5	0.3	1.1	0.7	0.6	54
June... ..	0.7	0.3	0.5	0.5	0.3	1.0	0.8	0.8	36
July ... ..	...	...	0.5	0.5	0.5	0.9	0.7	0.7	24
August ...	0.5	...	0.5	0.5	0.7	0.9	0.7	0.6	46
September ...	0.8	0.9	...	0.5	0.8	0.8	0.7	0.6	75
October ...	0.7	0.7	1.3	1.0	0.9	0.9	1.1	0.7	131
November ...	0.8	0.7	1.6	0.6	1.1	1.5	1.1	0.6	112
December ...	1.1	0.6	0.7	0.7	1.2	1.5	2.3	0.5	89

The numbers in this table show the average estimated force of wind, in each direction in every month in the ten years.

In January the largest estimated strength is—S.W. 1·9.			
„	smallest	„	„ E. and S.E. 0·7.
In February the largest „ „ W. 1·9.			
„	smallest	„	„ S.E. 0·6.
In March the largest „ „ W. 1·7.			
„	smallest	„	„ N. 0·4.
In April the largest „ „ S. 1·5.			
„	smallest	„	„ N.E. and N.W. 0·6.
In May the largest „ „ E. 1·4.			
„	smallest	„	„ S.E. 0·5.
In June the largest „ „ S.W. 1·0.			
„	smallest	„	„ N.E., E., and S.E. 0·3.
In July the largest „ „ S.W. 0·9.			
„	smallest	„	„ E., S.E., and S. 0·5.
In August the largest „ „ S.W. 0·9.			
„	smallest	„	„ N., E., and S.E. 0·5.
In September the largest „ „ N.E. 0·9.			
„	smallest	„	„ S.E. 0·5.
In October the largest „ „ E. 1·8.			
„	smallest	„	„ N., N.E., and N.W. 0·7.
In November the largest „ „ E. 1·6.			
„	smallest	„	„ S.E. and N.E. 0·5.
In December the largest „ „ W. 2·3.			
„	smallest	„	„ N.W. 0·5.

In July no air passed from the north or east in the ten years.

In August no air passed from the north-east in the ten years.

In September no air passed from the east in the ten years.

The S.W. wind has the largest average estimated force in five months—January, April, June, July, and August.

The W. wind has the largest average estimated force in three months—February, March and December.

The E. wind has the largest average estimated force in three months—May, October, and November.

The N.E. wind has the largest average estimated force in one month—September.

The largest average estimated force of the wind in any month was 2·3 from the west in December ; the next in order was 1·9 from the south west and west in both January and February.

The S.E. wind has the smallest average estimated force in four months—February, May, September, and November.

The N. wind has the smallest average estimated force in three months—March, August, and October.

The E. wind has the smallest average estimated force in two months—January and July.

The N.E. wind has the smallest average estimated force in two months
—April and June.

The N.W. wind has the smallest average estimated force in one month
—December.

The smallest average estimated force of the wind in any month was 0·4 from the north in March; the next in order was 0·5 from the north-east in both March and June; 0·5 from the south-east in May, June, July, August, and September; 0·5 from the east in June, July, and August, and 0·5 from the north-west in December.

The numbers in the last column show the total number of days of calm on those days that the air was not in motion at 9 a.m. in the ten years ending 1889, at Sarona. The three largest numbers are in the October, November, and April, 131, 112, and 89 respectively; the three smallest numbers are July, June, and August, 24, 33, and 46 respectively. The total number of days of air in motion was 2,772. The total number of days of observation was 3,653, so that in these 10 years, on 881 days the air was calm, or nearly so.

(To be continued in April "Quarterly Statement.")

THE LATITUDE OF MOUNT HOREB.

By CHAS. FOX, M.R.C.S., F.S.S.

My attention has been turned to a paper by J. Stow on this subject, in the *Quarterly Statements* of last year, p. 178; and, as further light may be thrown on it, and the reason of the error in his conclusion manifested, it appears due to send the following, and may, in some other respects, not be without interest.

The writer aimed to deduce the true latitude of Mount Horeb from the mystical map (as I would call it) of Israel, shown to Ezekiel, and of which he gives a diagram. Here, as he shows, each tribe is assigned an equal extent of Canaan, and there is a "God's acre" in the midst—the Holy portion, similarly measured—and he justly reasons that, the dimensions being actually given (in reeds) by the angel, it is possible, hence, to fix the position of Horeb, this being assumed to coincide with the "Waters of Strife in Kadesh." By this principle he has an unimpeachable rule; and yet, as is hinted in a note to the paper by C. R. C., his conclusion is $1^{\circ} 12'$ from the accepted site.

Seeing he deduces from such a source and discovers to the reader the chain of inference—whence there seems no room for an error in the demonstration,—how is it a wrong result can come out?

The northern limit of the typical map of Israel is placed by the angel at Zedad, and the southern boundary of the holy portion at Tamar; and, though the result should confirm their situation, the one of those places which is to be found in the fine modern survey, Zedad, is placed at lat. $34^{\circ} 22' N.$, instead of at $34^{\circ} 6' 55'$.

In fine, Palestine is found by Stow to be signified to be of 288 miles in length.

The avenue to error is in the affixing of the Cubit, and it is by a wrong selection here the results have been vitiated, no doubt. The real is 6 cubits, but what is the cubit? If we decide erroneously its length all will be wrong.

I could not at all concur in the standard the writer formed, and when I saw his results come out so near the facts I felt much discomfited, having a strong conviction, from researches on the Great Pyramid, &c., that the sacred cubit is of 25 inches, while he used one of 21.

The author, in seeking to fix this Jewish standard, assumes the cubit (profane) together with the hand-breadth, shown the Prophet at this time as the Divine unit, to be 18 + 3 inches.

As to the standard here adopted for the "common cubit," 18 inches, though found in Godwyn and in nature, a longer one is generally received. Bishop Cumberland and Pelletier assign the length as 21·888 inches, and the cubit of Egypt, Nineveh and Babylon is accepted as being about 20·68. Flinders Petrie, who states that of Egypt at 20·5 to 20·7, in a paper p. 28, shows 22·2 to 22·6 inches to be the Phœnician standard from measurements of tombs (of later Jewish times) about Jerusalem.

Secondly, the Hand-breadth is assumed to be but 3 inches. This also has been revised and made nearer 4, being fixed at 3·684. It might seem likely to be even more than this to many, and, if it were assumed at 4 (by the dorsum)—

20·68

4·32

25·00 inches, sacred cubit.

But, taking the larger standard—

21·888

3·684

25·576,

or, again, $21·888 + 3 =$ nearly 25.

This was decided by Newton to be the true length, probably, of the sacred cubit, and I am glad to see the author last quoted allow, in his late paper, that there is reason to think it the measure of it, and reporting that in one of the tombs he found an evident reference to this standard of length (25·2").

Jahn actually confounds this "great cubit" with the Babylonian, and the learned Godwyn—who is followed by Conder—positively calls the holy cubit a yard (twice 18 inches), and considers this, too, "evidently proved" from the single argument of the two measures given for the pillars Jachin and Boaz. Seeing that in Kings these pillars are stated as each 18 cubits high, and in Chronicles, 35 cubits, he concludes the latter, including one for the base, is a doubling of the first. But Newberry satisfactorily reconciles the two accounts. Each pillar, he says, doubtless, had a round portion of $17\frac{1}{2}$ cubits long, and a square base of

half a cubit. Then the columns proper would be together 35 in length and each 18; and, in support of this explanation, he observes that the Hebrew for *pillar* denoted a round one, and that the word translated *high* in 2 Chron. iii, 15, should be *long*.

The right affixing of the length of the sacred cubit is of much interest, and of great application for us. For the Tabernacle and Temple are, undoubtedly, to be held to be built by it, the measurements of which are so carefully handed down (as they were so carefully at first ordained and enjoined), and therefore must be fraught with mysterious significance. And, not only is it a truth that a number of the sublime harmonies and relations deducible from the Great Pyramid are dependent on the assumption of this evident Hebrew base and destroyed by supposing the Egyptian cubit instead, but I have found a host of others as beautiful in the other sacred structures just referred to, by transferring the cubical measures into British ones on the same hypothesis.

Thus, the transmutation of our own measures in the Great Pyramid to a cubit of 25 inches, and that of cubits (as of 25) to our own in the Tabernacle and Temple may be shown, alike, to furnish harmonies which their number and beauty prevent one's thinking would be undesigned — apart from the mystical significance which they undoubtedly, in that case, enshrine. It may here be added that the measures of all the divisions of Palestine, given to Ezekiel, are in close relation, since their width is invariably 25,000 reeds. Their whole system is on multiples of 5, and 25 is its square; just as in the Great Pyramid this number is most noticeable and constant, and also in the old Jewish economy and measurements. This being granted, it is *a priori* likely the true Jewish standard would be 25 inches — 5 being, moreover, the *Pentateuchal* or first Mosaic Sign.

Thinking it would be well to see what would be the results if *this* Sacred cubit were used, and whether the error in the latitudes would be any less than J. Stow brings out, I reduced his to this truer standard. By that he employs, 21 inches, the Reed would be $10\frac{1}{2}$ feet long. The learned Godwyn so far errs as to call it 6 cubits and an hand-breadth, and the Bishop 6 cubits simply, at 21·8.

But even then it is longer than made by our author, being 10·94 feet.

By the sacred cubit of 25·5 it is 12 feet 9·216 inches, but by 25 it is $12\frac{1}{2}$ feet.

Adding, therefore, 2 feet for every reed of the 145,000 of the length of the land of Israel, this would increase the estimate arrived at by J. Stow by nearly 55 miles. But great was my astonishment and joy to see the result that came out, as the correction of his calculation by the true standard of the sacred cubit—

	288 miles,	628 yards
Add	54 „	1,626 „
We have	343 „	486 „

for the true length of Israel.

This gives the sublime figure of the *cube of seven* as the mark or limit of the chosen people of God on earth, among the seven nations of Canaan, in accordance with the familiar symbolism, the perfect number being even set in a cube, $7 \times 7 \times 7$. And, though this were to me very sufficient proof of the justice of the standard I had employed to bring out such a perfect result, it is, further, in harmony with the arrangement of the Tribes. For, by a reference to Stow's diagrammatic map, it will be seen that it was so planned that seven divisions lay to the south and seven to the north of that sacred one assigned to the Temple, which was, indeed, the mystical centre of the land, in a sign of the one God and one altar—up to which the people had to come from every part. Here, then, is a double—even impressively marked in the arrangement, and now we find a threefold seven in the length, and it is obvious these are in unison intelligently, as each sets forth the entire land in the most practical and apparent way. It may be added that the increment, 486 yards, is but little short of $\frac{2}{7}$ mile, that is of the relation $3\frac{1}{2}$, half of seven.

Since the end of all researches and explorations is profit, or more abstract truth, and facts become useful and luminous when their significance and relations are found, I cannot doubt the foregoing discovery will prove interesting, perhaps in no common degree, to many readers, and well deserving of notice here.

It is even important, in the zeal of investigation—since this must travel so largely and earnestly in dry facts and the most mundane particulars—that that which alone makes all these enquiries of value be not overlooked or forgotten, as if details were of real worth in themselves. Explorers are constructing the language, letter by letter and word by word, indeed, but it is only *that it may be read* and enjoyed at last. Museums are the lexicons, but to stop at lexicons and grammars is a weary and fruitless task.

These remarks may explain the confidence with which I have noted and dwelt on the septenary result; and now, in conclusion, we may see how the latitude is given which the author sought to assign.

I pointed out that he placed Zedad, by this sacred authority, about $16''$ too low, and Tamar, perhaps, about as much too high (though this spot I can only find in a very small map). Thus he has made the land probably about 32 miles too short by his short cubit, and by that of 25 inches about 54 are added. Hence, the error is less—for now it is apparently 22 miles too long—which is less than 32; and this may, I suppose, be due to the uncertainties of accurately fixing ancient places. I do not know if topographers are well assured of the exact site of Zedad, and Tamar does not seem to be found on the map.

Horeb (Sinai) is given as $25^{\circ} 32' N.$, and the latitude his demonstration led Stow to was $29^{\circ} 44'$. I believe, by the correction now introduced, it would fall at about $29^{\circ} 25'$ by this sacred authority—which is nearer the above. Seeing the point indicated is that of the Waters of Strife, and the mountain is necessarily of large extent, it is possible the figure now given may be accurate; it is at least nearer the facts of geography

than the one afforded by the map of Ezekiel when interpreted by a 21-inch cubit.

Seeing the result that appeared in symbolic measure, I cannot but suppose the conclusions correct so far. For here an almost perfect quotient is afforded. Hence the errors in latitude of places still evinced is either, I conceive, imaginary—due to errors in surveying or in fixing sites—or owing to mistakes in my own application of distances to latitudes. Let us also add that, *granting the necessary truth of the result which gives 7-cubed*, it follows that 25 inches is the true sacred cubit, and it can be precisely determined by this singular argument, which is, at least, not one to be lightly set aside. Some may dispute its cogency, but it appears a sound one to me.

November, 1892.

NOTES AND QUERIES.

By CHARLES FOX, M.R.C.S., F.S.S.

I TAKE this channel to make two or three enquiries and animadversions relative to particulars carefully and laboriously supplied, and which, from certain clues my researches on the Great Pyramid, Tabernacle, and Temple have supplied me with, I deem to be of much interest. It is surprising, and should ever be borne in mind by explorers and on the coming to knowledge of fresh antiquities, how there is nothing scarcely which one day, in the light of explanations not yet reached or of other facts not yet discovered, may not prove to be of interest we should now never suppose. Thus monuments, larger and smaller, were for ages neglected because they were thought meaningless or, at best, enigmas, which are now found to supply confirmation of History or mystery, or to be links of great value, or serve to establish the integrity and authenticity of Holy Writ. What a striking existence of this is the Boundary Stone of the Cities of Refuge, a small relic and seemingly unintelligible at first! and had not the *very spot* it was found in been noted, we should have lost the deeply interesting and single evidence of the truth of the Bible record as to their extent. Again, the ancient sarcophagus which is found to contain the expression "Under the Sun" in its long and apparently useless inscription has affirmed the Oriental accuracy and antiquity of the Ecclesiastes some had denied. So that it is most desirable every fact of location, name, number, &c., as well as marking and form, in new finds should be observed, since all may be found to have a bearing on sacred things, whether more or less directly, and many to be such themselves. For it is to be considered always that we know not what new explanations and theories *will* be reached, especially as further facts are obtained, and that *then* things before unintelligible, and indeed uninteresting, and details long held of no consequence and overlooked may suddenly be of

great interest. These may then even serve to establish or to answer a new hypothesis, or to solve a new question, or may throw complete light unexpectedly upon some other monument or some text.

These principles are familiar to the readers of the *Quarterly Statements*, if they are to anyone; but I judged it would not be superfluous to state them emphatically, to remind those engaged in enquiries and explorations, and all who may fall in the way of new matter, of their importance. For, if not done at the time, the opportunity may be lost for ever to sacred science, whether of mystery, doctrine, topography, or hermeneutics, so that it often rests in the hands of the finder. And it is important for him to remember that it may be long after our time things will be understood which cannot be by us, so that it follows that they are indifferent because we are still ignorant of so much. Knowledge is ever enlarging and bringing new theories, which lead, at length, to the fixing of principles new to us, like the laying of new lines of rail which open fresh domains, and we know not *whence* the aid will come, any more than when.

Notes and Queries.

I. Whether G. Post was able to secure and save the two stones he figured in *Quarterly Statement*, 1891, p. 300, at or from Buswâyh.

The design on the coffin lid (1) seems to me of new and extreme beauty -- a cross figured in palms—not to speak here of its mystical characters, which are not less beautiful as expressing Christ.

This stone, as is stated, may be from an altar. It is probably fully as likely to be a pavement as a sepulchre stone. *It is strikingly homologous in design with the matter referred to next.* I conclude it has lost $7\frac{1}{2}$ inches from one (the left) end, as well as being broken across. Both the stones appear to me of peculiar interest.

II. B. Schick does not state the general position of the highly-mystical and beautiful mosaic he describes and figures in *Quarterly Statement* of this year, p. 190. It is of great interest to the significance whether it is Oriented, as I have little doubt it is.

I conclude in his picture the lozenges are made too narrow from side to side (as it lies): they are almost or quite square. He states that they are not square, and in figuring the pavement by his description it seems to me they cannot be. This is probably the error in his valuable drawing which he refers to, as compared to a photograph (?).

III. The same explorer does not state, in his account of Gordon's Tomb of Our Lord, the size of the Eastern chamber, as I read. Note, the points of the compass are, by mistake, put wrong: I assume, north where east should be in the diagram.

IV. The indefatigable Schick, in his plans of the singular Rock tomb at Bethany, p. 249, makes some of the measures not exactly agree with the text.

V. Can anyone state the accurate dimensions of the Chamber in the *Sukhra*? This hidden place is of very remarkable occult significance, as I

have demonstrated from what accounts of its size I could gather, for the Sakhra is doubtless the most marvellously interesting relic almost in the globe, and we cannot wonder at the veneration paid to it, though blindly, therefore, by the Mohammedans—in preserving it, enclosing with rails, and making it the centre of their great Dome. As far as I am aware, it has scarcely been minutely enough described—which is the case with many monuments which most of us cannot go and measure for ourselves.

VI. Can anyone say whether a window into a tomb is very rare, or are there other cases like "Gordon's Tomb" and Conder's in this feature?

MUD SHOWERS AND THEIR EFFECT ON BUILDINGS IN PALESTINE.

By the Rev. J. E. HANAUER.

LAST May I happened to spend a Sunday at Nazareth. About fourteen years had elapsed since I had last visited the place, and on this occasion I was very much surprised at the change that had during that time taken place in the colour of buildings there. The Protestant Church, for instance, which in 1878 was fresh, white, and conspicuous, had weathered into a light brown or yellowish tint, and was difficult to distinguish from other buildings near it; whilst, from the same causes, it was scarcely possible to recognise the Orphanage of the Society for Female Education in the East, situated on the hill-side high above the town, and which, when new, could easily be seen at a great distance.

So struck was I with this circumstance that I resolved that on my return to Jerusalem I would pay particular attention to the colour of buildings there.

The first discovery I made was that whether or not familiarity breeds contempt, it was certain that in my case it had produced blindness, for it was only now (when my special attention was drawn to the subject) that I noticed, what I had seen thousands of times before and yet never observed, namely—that whilst the city walls and towers were, generally speaking, both externally and internally, grey on their northern and western faces, which are most exposed to rain, yet that their southern and eastern faces, whether external or internal, were of different shades of tawny yellow, ochre, or brown. Closer examination showed that this remarkable difference of colour in the eastern and southern faces from that of the western or northern was due, not merely to greater exposure to sunshine and protection from rain on the east and south, *but to the presence of a curious coating or pigment* varying, according to the hardness of the stone it adhered to (or to the angle of protection and cover afforded by projections or buildings near), in the shades of yellow, ochre, and brown; and further, that these tawny patches of colour are found not only on

old buildings such as the city walls, the Church of the Holy Sepulchre, and minarets, &c., but also, and with equal richness of colour, on some modern ones known to have been built before 1860 for instance, on the south wall of Christ Church, and on the oldest part of Bishop Gobat's School.

These observations led me to make special enquiries on the subject and I was told by several old European residents that the yellow colour was caused by a remarkable shower of yellow mud which fell about thirty-five years ago.

I was also told that Professor Roth of Munich, who happened to be here at the time, examined this yellow mud and found it to consist of sand similar to that found in some parts of the Sinaitic peninsula and to contain many minute shells also found in that region.

Mr. Schick has, in answer to my written enquiry, kindly favoured me with the following note :—

"The rain of clay happened in the year 1857. I think it was in February. There were showers of rain before, then scirocco came for a few days. That evening the sun disappeared and then, in the night, there followed a shower of rain which brought down all the very fine dust in the air. All channels were stopped up with a sort of fine clay of yellow colour, and everything exposed was painted yellow, but the following rains washed off a good deal. 'Gakooli' stones, however, remained yellow, as they usually become by the process of exposure to sun and rain, whereas harder stones keep the natural colour. Such a rain mingled with clay has since then fallen on several occasions, but only slightly, and never in any quantity worthy of comparison with that above mentioned. Sometimes small shells fall with it or may be detected in the sediment."

I have ventured to call attention to this fact because I do not remember having noticed any mention of it in works on Palestine, and I therefore hope it may not be uninteresting to readers of your valuable *Quarterly Statement*.

ANCIENT JERUSALEM.

Zion or Acra, South, not North, of the Temple.

By the Rev. W. F. BIRCH.

SIR CHARLES WILSON, in his lecture on Ancient Jerusalem, places Acra, and consequently the stronghold of Zion, north of the Temple. This position seemed to have been so riddled by the arguments given in the *Quarterly Statement*, 1888, p. 44, and 1886, p. 26, that I thought it was clearly untenable. It was with much surprise, then, that I found so cautious and able an authority on Jerusalem supporting the northern site. In self-defence I feel called upon to examine his theory, as

antagonistic to mine, that the City of David (or Acra) was solely on Ophel (so-called), south of the Temple. Should his view prove to be true, it only remains for me to own my errors and to keep quiet for the future.

Now, Sir Charles Wilson (practically) admits that the Biblical evidence places the City of David south of the Temple. I understand him to allow that in Nehemiah, the House of David, the stairs of the City of David (iii, 15 ; xii, 37), and the sepulchres of David, are all placed on Ophel ; indeed, on a plan approved by him, the sepulchres of the kings (which were in the City of David) are marked as due east of Ain Silwân, close to the upper pool of Siloam.

"The outer wall to the City of David, on the west side of Gihon in the valley" (2 Chron. xxxiii, 14), he locates on the west side of the Virgin's Fount, *i.e.*, on Ophel, and considers that 2 Chron. xxxii, 30, would most suitably apply to the Siloam tunnel, if only Ain Silwân could be described as on the west side of the City of David. His objection, however, seems to be already answered by the above plan, which places Ain Silwân *due west* of the most remarkable spot in that city, *viz.*, the sepulchres of the kings.

This is all the Biblical evidence, and it is enough. Sir Charles Wilson agrees with me as to my southern site for the City of David (and also for Acra) ; but, in my opinion, he is mistaken in maintaining that these names originally belonged to the site of Antonia, north-west of the Temple, and afterwards were used to comprehend the whole eastern hill down to Siloam. Of course, for this he has no Biblical evidence ; he relies solely on Josephus. I maintain, however, that the Bible is clear, and Josephus confused. One may elucidate Josephus by the Bible, but not the Bible by Josephus, as he contradicts in turn the Bible, 1 Maccabees, and himself. Sir Charles Wilson brings to his task a deep acquaintance with the natural features of Jerusalem, and only goes astray because he confides too readily in Josephus and his interpreters.

It is interesting in the case before us to note how a cautious writer comes to (what I must consider) several wrong conclusions. He seems predisposed to solve difficulties by extending terms. Thus, the expressions "Upper City," "Acra," or the "Lower City," and the "City of David," are made to comprehend in later times more than the parts to which they were first applied. In the same way, Gihon is not taken to represent only one spot, but is thought to be applicable to two or three ; and whilst the Hebrew word *nachal*, in regard to Jerusalem, is noted as being the unvarying term for the *brook* Kidron ; the other two terms, *gai* (ravine) and *emek* (dale), are taken as interchangeable, and thus the topographical lamp approved of by Gesenius (*Quarterly Statement*, 1878, p. 180 ; 1889, p. 38) and others, is at once extinguished, with the result that Sir Charles Wilson thinks he has fixed the original Acra, or the stronghold of Zion, on the site of Antonia, north-west of the Temple ; while to me it seems perfectly clear that the Ophel site is the only one possible.

Sir Charles Wilson (agreeing herein with Sir Charles Warren, *Quarterly Statement*, 1888, p. 43) considers that the place at Jerusalem where the first settlers would establish themselves was close to the Virgin's Fountain (i.e., Gihon) ; yet, I regret to say, he identifies this with En-rogel because he thinks there was only one natural spring near Jerusalem. To me it seems incredible that Gihon and En-rogel were identical, and it is pointed out in *Quarterly Statement*, 1889, p. 46, that at the time when En-rogel is first named in Joshua, there was an actual spring (ain) near Bir Eyûb, used by the Jebusites, even if there had not been an occasional spring at the same place in prehistoric times.

But I come to the main point. What evidence does Sir C. Wilson give that Acra, and previously Zion, the castle of the Jebusites, were north-west of the Temple site? Since the proof tendered is based upon Josephus, let me premise, as observed by Williams, that "no reliance can be placed on Whiston's translation, which is very inaccurate."

The arguments are as follows :—

1. Josephus ("Wars," V, iv, 1) says that Jerusalem (Lecture, p. 2) "was built on two hills opposite to one another, but divided in the middle by a ravine." The western hill sustained the Upper City. This last Sir C. Wilson does not confine to the modern Sion hill, for he says "The term *Upper City* is upon one occasion (Lecture 6) applied by Josephus to the high ground between the Jaffa Gate and the north-west angle of the present wall." On reference to this passage ("Wars," II, xix, 4) it turns out that Whiston's *mistranslation* of *πρός* as *into*, forms the whole ground for carrying the Upper City north of the first wall of Josephus. Thus there is no evidence that the term Upper City is ever extended.

2. Sir C. Wilson points out that the eastern hill, reaching from Antonia to Siloam, had in its natural state "the form of the crescent moon," and that Josephus say that "the other hill, which was called Acra, was the shape of the crescent moon." The actual word used by Josephus is *ἀμφικύπτos*, which Whiston *mistranslated* by "the shape of the moon when she is horned." The word, however, does not mean crescent-shaped, but gibbons, or, with sloping sides, as pointed out in *Quarterly Statement*, 1886, p. 30 ; and 1890, p. 129. It is obvious, then, that the natural crescent form of the eastern hill receives no confirmation of this characteristic from an epithet not signifying crescent-shaped. In other words, this wrong interpretation is not any evidence that the term Lower City or Acra was extended beyond the part south of the Temple, while it is conceded that it was frequently applied to that southern part.

Thus in these two cases Josephus does not really support the view that the Upper City on the west, and the Acra or Lower City on the east, extended to the north of a line drawn along the northern brow of modern Zion to Wilson's Arch. Let me now show from Josephus that even the term *Tyropæon* is not applied by him to any part to the north of Wilson's Arch.

In "Wars," V, iv, 1, Josephus adds that at the ravine called the

Tyropæon, which separated the Upper City from the Lower, and reached to Siloam, "the corresponding rows of houses on both hills end" (Whiston).

It will readily be admitted that south of the south-west corner of the Temple (or Haram), the Upper City and Acra (may have) had houses as described above; but from this corner to the north-west corner of Antonia there was (practically) a long high wall or fortification, with the necessary approaches to some of the western Temple gates. Still, if, for argument's sake, it be admitted that there were houses in some places along this western part of the eastern hill, then I must point out that Sir C. Wilson's own application of Josephus (*see below 3*) shows that the valley to the west of the eastern hill was no longer regarded as the Tyropæon.

Josephus goes on to say that over against this (Acra), there was a third hill, naturally lower than Acra, and once separated from it by "another broad ravine" (Williams), which was afterwards filled up, with a view of joining the city to the Temple. Again, in "Ant.," XV, xi, 5, he says of the western gates of the Temple, "The remaining one led to the other city (or rest of the city), where the road descended down into the valley (or ravine) by many steps, and thence up again by the ascent, for the city lay over against the Temple in the manner of a theatre, and was encompassed with a deep ravine along the entire south quarter." In his lecture, p. 7, Sir C. Wilson says, "The lower slopes of the western hill (*i.e.*, north of the first or old wall) were known on the south as the *suburbs*, and on the north as the *third hill*, on which stood the *other city*." Further on, p. 9, he explains the expression to the "other city," as meaning, in other words, "to that quarter of the city which lay between the first and second walls" (called, by an oversight, the second and third; *see p. 11*). This quarter, I may add, Josephus describes as "the northern quarter," in "Wars," V, iv, 2; and I, xiii, 3; but as "the suburb," in "Ant.," XIV, xiii, 4 (where he narrates the same event), and XV, xi, 5 (*Quarterly Statement*, 1888, p. 108).

But if the slopes within the second wall were (as interpreted by Sir C. Wilson) separated from the eastern hill by another broad ravine, called *another* by Josephus *in opposition* to the Tyropæon, it is clear that the two thus distinguished were neither regarded as one and the same, nor called by the same name.

Here once more Whiston (according to Williams) mistranslates Josephus in rendering *another* by *from the other*. But not to insist on *another*, it must here be pointed out that, if "the other city" in "Ant." XV, xi, 5, be identified with Sir C. Wilson's third hill, then, as the city had a deep ravine along its whole southern quarter, it follows that in this part the Upper City and Acra (here Antonia and part of the Temple according to Sir C. Wilson) was separated from each other not by one ravine, but at least by two; for the (practically) right angle formed by eastern hill and north wall of the Upper City contains both the broad ravine on the east of the third hill or other city, and the deep ravine on

its south side. The Tyropeaon in no case can do duty for two ravines, in whatever way ἀλλῇ be translated.

Thus the extinction of the "crescent" and limitation of the Tyropeaon to the part where houses on the two hills faced one another, exclude all sound reason at present from carrying Acra further north than the southern limit of the Haram or of the Temple.

3. Sir C. Wilson, however, under the impression that Acra was a term covering Antonia and the Temple, would identify the northern quarter within the second wall ("Ant." V, iv, 1; *Quarterly Statement*, 1888, p. 108) with the third hill over against Acra, and with the other city to which the last-named gate led.

Josephus happily adds that the broad ravine was filled up with the view of joining the city (on the third hill, as I understand Sir C. Wilson) to the Temple. This line to the Temple can only have been a short distance north of Wilson's Arch, and must have coincided with the line of passage from the gate just named, which had many steps leading into the valley and up again to the (means of access or) ascent. For as it is most improbable that there should have been a mound across the valley, and many steps down into it and up from it, side by side, offering alternative routes to the same part, one seems driven to make the two ways *coincide*, so that if this interpretation of Josephus be accepted, the way from the last gate led down many steps into a valley, which was really no valley at all at that time, having been already filled up.

The improbability of such an arrangement satisfies me that this interpretation of Josephus is wrong; and yet (so far as I can judge) such a result has to serve Sir C. Wilson, as all the evidence available for identifying the northern quarter with the third hill and with the other city; and for conferring the term Acra on the Temple and Antonia.

As, therefore, there is nothing to show that the term Acra ever got to the Antonia site, it is needless to consider how it could have got away from it to the Temple site, or to the part south of the Temple to which alone it is really applied by Josephus. Acra was on the site of the fort or City of David in which David dwelt, but what is true of Acra is true also of David and his city. There is no evidence taking either of them first to the Antonia site and afterwards down from it to Ophel (so called).

In *Quarterly Statement*, 1888, p. 44, I pointed out the unsoundness of the arguments alleged in favour of the northern site for Acra by Fergusson, Thrupp and Lewin. Let me now give other points against the northern, and in favour of my southern site on Ophel.

(a.) Josephus nowhere gives the title of Acra or Lower City to Antonia or the Temple; but he repeatedly gives it to Ophel (so called).

(b.) The Bible (as already noticed) in several places applies the term City of David (or Zion) to Ophel (so called).

(c.) Josephus says that the Acra, after it was cut down, was lower than the Temple site. The Antonia site, on the contrary, is higher, even at the present day. (*Quarterly Statement*, 1878, p. 186.)

(d.) The southern site, however, is so much below that of the Temple, that its very lowness has been urged as proving that it could not have been the City of David, the stronghold of Zion, or Acra; and this has been urged most strongly by those who believe that the Acra had been lowered, but curiously failed to see that, if it had been lowered, it might formerly (for all that they could tell) have been high enough even to have commanded and overlooked the Temple hill.

(e.) Josephus no doubt firmly believed that Acra used to be higher than the Temple, and actually *alters history* to make it square with his notions, for whereas I Maccab. vii, 32, 33, says that Nicanor went *up* from the Acra to Mount Zion, Josephus on the contrary ("Ant." XII, x, 5) says he went *down* from the Acra to the Temple.

A similar instance is given in *Quarterly Statement*, 1880, p. 168.

When, therefore, Josephus speaks of the Acra overlooking or overhanging the Temple, we know what such an unsupported statement is worth. When, again, he speaks of the Acra being lowered, of which exploit I Maccabees knows nothing, or of there having been a valley, and of its being filled up, between Acra and the third hill, it is necessary to bear in mind that Josephus is talking of what he had not seen and about which he is probably only making a guess.

(f.) Josephus says there was a third hill over against Acra, but naturally lower than Acra, and once separated from it by another broad ravine, which was filled up with a view to joining the city to the Temple.

This third hill here must have been the Temple hill, since there is no evidence that the Acra was itself the Temple hill, and the city must have been the Lower City or Acra.

(g.) The road by the last gate led by Robinson's arch "into the ravine and thence up again to the other (or rest of the) city, which had a deep ravine along its whole southern quarter." This deep ravine was Wady Rababeh, commonly but wrongly named the valley of Hinnom. The Tyropæon is never (so far as I know) called either a broad or deep ravine, though deeper than the ravine north of the first wall.

(h.) If the fort of Zion had been at the Antonia site and another part of Jerusalem on Ophel (so called), it would be interesting to know what is to be done with Araunah's threshing floor. Prof. Sayce (*Quarterly Statement*, 1884, p. 174), hazarded the statement that it was inside the city, being private property, but he adduces no evidence of threshing floors being so situated. But if the threshing floor were outside the city (as I believe it was), the difficulty would still be great of connecting or not connecting the Acropolis with the lower city near Gihon.

Lastly, with the castle of Zion at Antonia, how are we to account for the successful resistance of the Jebusites for 400 years, when the area was so limited that David had to build his cedar house far away on Ophel? It was in the plains that the Canaanites held their own, having iron chariots. What was there then in the unproved northern Zion to make it impregnable? Nothing whatever. As soon, however, as the

stronghold of Zion is placed in the position marked out in the Bible, the truth begins to leak out, and the mystery that has hung over Zion for centuries vanishes away in the solution given by Kennicott a hundred years ago.

The secret of Zion's long invincibility did not lie either in the height of its scarp and walls, or in the valour of its defenders, but in its happy possession of an unfailing supply of water from Gihon by means of the secret passage called in 2 Sam. v, 8, "the gutter." Its fall at last was due neither to overpowering numbers, nor (as would at first sight appear) to the extraordinary audacity of Joab, who led the scaling party through the horizontal aqueduct, up the vertical shaft, and then along the oblique winding gallery on Ophel, so capturing Zion, and gaining the object of his ambition. "Joab the son of Zeruiah went up first and was made chief."

The ascent of the gutter proved far too tedious and difficult a task to Captain Warren on 24th October, 1867, in time of peace, for it ever to have been effected in B.C. 1047, in time of war without help from within. Some Jebusite, mindful it may be of Jericho, Gibeon, and Bethel, obviously made peace with Israel, by selling the fortress into the hands of David. Circumstantial evidence, and the repeated and consistent indications of Josephus, leave no doubt on my mind that this traitor was Araunah. Contempt for the deed will, no doubt, give place to commendation of the doer, when it is borne in mind that he thereby saved his life, and eventually netted 600 shekels of gold, thus doing well unto himself.

While many are freely giving a good sum to buy a doubtful tomb at Jerusalem, will no one provide a small fraction of that amount to secure possession of "the gutter," and by re-opening Sir C. Warren's passage to the surface of Ophel, enable visitors at Jerusalem to explore the ancient scene of Joab's famous exploit. There need be no fear about *this* position maintaining its claim to be considered the *most* interesting of genuine sites at Jerusalem, until the auspicious day dawns, on which access will be gained to the true but long-concealed sepulchres of David on the southern part of Ophel.

So far from finding it necessary to abandon my "gutter" and Araunah, I feel now more convinced than ever that I have got hold of the truth, and have the utmost confidence in a theory which, after standing the test of fourteen years' criticism, has just passed unscathed through Sir Charles Wilson's severe examination. Neither can I myself find the flaw in my theory, nor can I find anyone to detect it for me. If among the readers of these pages any Solomon or Daniel wishes to outdo the prowess of Joab, he can (I think) hardly do better than assail with argument "the gutter," up which that crafty hero climbed. I shall be obliged by anyone discovering arguments that I have hunted for in vain. The strength of the position (I need hardly say) lies in its being really not mine, but that of Nehemiah and the Bible.

IDENTIFICATION OF SAINTS IN THE MARONITE CALENDAR.

By the REV. CANON BROWNLOW.

I HOPE I have been able, with the aid of the Roman Martyrology and the Bollandists, to identify some of those Saints in the Maronite Calendar which you have marked with a (?).

February 1	....	....	S. Pionius, priest, martyred at Smyrna?
April 11	....	....	Barsnophius = Barsanuphius, an Anchorite who suffered under Julian at Gaza.
April 24	..	....	Basincratius = Pasicrates and Valention, martyred at Rhodostulo.
May 10	....	....	Roman Martyrol. "In terra Hus, S. Job propheta." In Greek <i>Ἀβσάρης</i> , which might easily become Ishusius. There is a martyr, <i>Hesychius</i> , commemorated on this day, but I strongly incline to <i>Job</i> .
June 26	....	....	I cannot find any Posidonius or Busidonius.
July 9	....	....	Qubre and Batramasius = Paternuthius and Copretis, martyred at Alexandria, under Julian.
September 25	....	....	Baphnutius = Paphnutius, an Egyptian Bishop, who lost an eye under Galerius. He was at the Council of Nice.
October 12	....	....	Brophus Tarchus = Tarachus, Probus, and Andronicus, martyrs.
October 14	....	....	Grophasius and Protasius = Gervasius and Protasius, kept in Roman Martyrology on June 18th.
October 27	....	....	Capitolina and Caruhitida = Capitolina et Erotheidis, martyrs.
November 28	....	....	"Stephen the Jew" is a mistake for "Stephani Junioris," Stephen the Younger, a Monk with 339 others martyred by the Iconoclasts.
December 30	....	....	Innocia = Anysia, Martyr at Thessalonica. I am not sure that it does not mean Euphrosyna and Theodora, attendants upon Flavia Domitilla, who suffered with her under Domitian, in Roman Martyrology, May 7.
December 31	....	....	Yarotaus Zutichus = "Sanctm. Martyrm. Victoris, Zotici, &c," in Roman Martyrology, April 20.

NOTES ON THE "QUARTERLY STATEMENT."

By Major C. R. CONDER.

P. 334. Dr. Flinders Petrie's note is interesting, and the publication of the British Museum letters from Tell Amarna shows he is right as to such letters having been written in Egypt, since one of those now published is from Amenophis III to the King of Babylon. As regards *Khu-en-Aton*, supposing him to have been the son of Amenophis III (which has been disputed), I think his features decidedly Mongolic and very like the lowest Hittite type on the monuments, but he was not a pure Hittite. We are not forced to speculate on the deductions to be drawn from such portraits, since we have inscriptions which give us more definite information. The people of Mitani may have been partly Semitic partly Mongol, owing to the vicinity to the Assyrians. Few, if any, of the Asiatic stocks were of pure blood in 1500 B.C.; and as the language of the Egyptians shows they themselves were then partly Nubians, partly old Egyptians, with infusion of Mongol and Semitic blood. The language of Dusratta was Mongolic—very like Turkish—and the Hittite Prince of Rezep, north of Palmyra, also writes in Mongolic dialect. Dusratta, of Mitani, was the Hittite overlord, and about 1480 B.C. we hear of the King of Mitani, with the King of the Cassites and the Kings of the Hittites, of Kadesh, and Merash, forming a great Mongol league to throw off the Egyptian yoke. They took Damascus and poured over Northern Bashan. M. Halévy has lately stated that the Hittites must have been Semitic, because there has been discovered at Merash a Phœnician or Aramaic text of about 800 B.C. written in the alphabet of that age. The Tell Amarna letters show us that the Amorites in this region spoke a Semitic language, but they equally show us that the Hittites were Mongols.

P. 328. I do not wish to enter into controversy with the Rev. Haskett Smith or any other writer, as I think the results of controversy are generally that each disputant remains of his own opinion. I do not agree with either his geographical, his historical, or his archaeological views on many points. He has handsomely allowed his want of acquaintance with some of the books which would have been most useful to him.

Dabbusheth I believe to have marked the north border of Zebulon. I may be wrong, but I cannot believe that the root D.B.S. could ever have changed into Z.B.D. I do not know any well-established case in which such turnings inside out are necessary to suppose. As a rule, the ancient names remain unchanged, or change only according to laws which apply to the language as a whole and not to the topography only. Mr. Smith reduces the tribe of Zebulon to a mere narrow strip of country, six miles north and south. This seems to me much too small and to leave an area between Zebulon and the other tribes. I do not think his views as to

Hamathon and Jiphtah-el likely to win general acceptance. As to Neah the question is treated in Smith's "Dictionary of the Bible" very well. Kazin and Kenna cannot have anything to do with one another.

THE TOMB OF OUR LORD.

By R. F. HUTCHINSON, M.D.

THERE are three or four points, at least, which must be taken into consideration in attempting to localise the site of our blessed Lord's crucifixion, and necessarily that of His entombment.

1. It must be on or near a public road.
2. It must be within easy hail of the reviling priests.
3. It must be across or on the left or eastern side of the Kedron.
4. It must be near a garden.

1. The close proximity of a high road.—St. Matthew tells us (xxvii, 39) that "they that passed by reviled Him, wagging their heads"—and St. Mark, "they compel one Simon, a Cyrenian, who passed by, coming out of the country, ἀπ' ἀγροῦ, to bear his cross (Mark xv, 21).

2. It must have been within easy range of the reviling priests—i.e., their abuse *must* have reached (to be effectual) the ears of the dying Sufferer. Whence, then, must it have been hurled, if these sanctimonious individuals would not enter the Prætorium, "lest they should be defiled, but that they might eat the Passover?" (John xviii, 28/), would they have risked certain defilement by mixing in a rabble on a public highway, and at a public execution? Whence, then, came their abuse? With the busy hum of the city, overcrowded at Passover time, and the distance of the traditional site from the western Temple wall, 1,450 feet, it could hardly have reached the Sufferer's ears, and certainly not at Gordon's tomb, 1,700 feet north of the northern wall of the Temple, with the Prætorium intervening.

But from the *eastern* Temple wall there was no obstruction, and from its lofty height their abuse could easily have reached the dying Sufferer's ears; indeed, to write with the utmost reverence, their reviling would have been most appropriate—and might have resembled that of the passers-by—with their wagging heads—

"Ah. Thou that destroyest the Temple,
And buildest it in three days,
Save Thyself, and come down from the cross;
He saved others—Himself he cannot save."

Mark xv, 29-31.

The distance of the traditional Gethsemane, the scene of His agony, crucifixion, and burial, is only 700 feet from the eastern Temple wall.

3, 4. If this fact is allowed, then the east side of Jerusalem must have been the scene of the Crucifixion, and where our blessed Lord died, there was he buried, for “*in the place* (ἐν τῷ τόπῳ, not *near it*) where He was crucified there was a garden (κίππος), and *in the garden* (ἐν τῷ κίπῳ) a new sepulchre, wherein was never man yet laid. There laid they Jesus” (John xix, 41, 42).

That garden *cannot* be the traditional Gethsemane, for the following reason: the Virgin Mary was laid close to the scene of her Son's death and burial; but her reputed—I may say, undoubted—grave is now at least 60 feet under ground,¹ due to the Valley of the Kedron having been completely filled up by Hadrian after his total destruction of Jerusalem in A.D. 135. Therefore, we must search for our blessed Lord's tomb in the rocky scarps south of the Virgin's tomb, and we know that it was unilocular (Matt. xxvii, 60), and that the loculus was on the *right* side (Mark xvi, 5), and closed by a cylinder of stone rolled up an incline (Mark xvi, 3). That sacred tomb is yet to be found on the level, and to the south of the Virgin's grave.

THE SITE OF THE HOLY SEPULCHRE.

THE “Times” of September 22nd, 1892, contained a letter, signed by Mr. H. A. Campbell and Mr. John Murray, appealing for funds for the purchase of what has been known for some years as “Gordon's Tomb” at Jerusalem, on the ground that the probability of its being the Tomb of Our Lord renders it desirable that it should be preserved from destruction. Strong objections were made to this proposal, and considerable correspondence respecting it took place in the columns of the “Times.” The question being one of great interest we publish, by special permission of the “Times,” a selection of the principal letters, together with the “Times” leader on the subject:—

“‘THE GARDEN TOMB’ AT JERUSALEM.

“To the Editor of the ‘Times.’

“Sir,—Many of your readers are doubtless acquainted with the spot lying outside the Damascus Gate at Jerusalem, which is commonly known as ‘Gordon's Tomb,’ from the fact that General Gordon, amongst many others who have made a special study of the question, believed it to be

¹ Burcharden de Monte Leoni tells us (p. 68), “There is moreover, on the surface of the ground a certain edifice in the shape of a chapel, which when you shall have descended into its interior by very many steps, you will arrive underground at the sepulchre of the glorious Virgin. And I believe it, because there are sixty.”

the actual Sepulchre of Our Lord. This question of identity is one of the deepest interest, and although all archaeologists are not agreed, and in the existing state of our knowledge a complete solution of it cannot perhaps be looked for, the probability that this tomb may be the Holy Sepulchre renders it very desirable that it should be preserved from destruction or desecration. The tomb, together with the enclosure in which it stands—an area of about four acres—is now for sale, and the time for which we have obtained the refusal of it has almost expired. The price asked for the freehold is 4,000*l*. The object and desire of those who have taken the most active part in the negotiations is to purchase this site, to carry out such excavations and restorations as may be considered advisable by the most competent authorities, to lay out the garden, and to vest the property in the hands of trustees, with a view to maintaining it as far as possible in its present simplicity. In addition to the purchase money it is estimated that the sum of about 2,000*l*. would be required to meet legal expenses, to place the tomb and its surroundings in order, and to provide for the maintenance of the garden. Nearly 1,000*l*. have already been collected privately, and we would ask to be allowed to make an earnest appeal to the public to enable us to seize an opportunity, which may never occur again, of securing and preserving a locality which must be of the highest value and interest to all Christians. The following gentlemen, in addition to many others, without committing themselves to any confident opinion as to the identity of this tomb with the Holy Sepulchre, have expressed their cordial approval of the purchase of the site, and in many cases have already subscribed to the fund:—The Archbishop of Canterbury; the Bishops of Salisbury, Rochester, Ripon, and Cashel; the Archdeacons of London and Westminster; Canon Tristram; the Hon. Rev. E. Carr-Glyn; Professor R. Stuart Poole; the Rev. Sinclair Paterson, M.D.; the Rev. F. B. Meyer; Lawrence Hardy, Esq., M.P.; F. A. Bevan, Esq.; Hon. H. Dudley Ryder, &c. Subscriptions may be sent to either of the hon. secretaries, or paid in to the Garden Tomb (Jerusalem) Purchase Fund, at Messrs. Barclay, Bevan, and Co.'s Bank, 1, Pall Mall East, S.W., London.

“We are, sir, your obedient servants,

“HENRY A. CAMPBELL,

Eastwell-park, Ashford, Kent,

“JOHN MURRAY,

50, Albemarle-street, London, W.

} Hon. Secs.,
pro tem.”

“To the Editor of the ‘Times.’

“Sir,—As I see that it is proposed to raise a large sum of money to buy a certain tomb at Jerusalem under the supposition that it may be the true site of the Holy Sepulchre, will you allow me to warn those interested, by means of your columns, that there is not only no reason to suppose that this tomb is the real site of the tomb of Christ, but that there is

every reason to suppose that it did not exist in the time of Our Lord at all. The tomb was excavated in 1873 (nearly 20 years ago), and I then explored it, and found in it the remains of the bones of a large number of persons and two red paint crosses on the walls, which had the form of a Latin Patriarch's cross, and could not be earlier than the 12th century, A.D., in Palestine. The tomb was close to a large Crusading hospice, and I have no doubt that it was used for the burial of pilgrims. It has not the form of the Jewish sepulchres such as were in use about the Christian era; but it resembles the tombs that were cut by the Greek Christians of about the 9th century A.D.—such as that of Thecla Augusta, south of Jerusalem. Two inscriptions giving the names of deacons of the Greek Church, and, by the characters used, dating from the Byzantine period, have been found near the tomb.

“The tomb, with many others of the same Byzantine age, is close to the great knoll which (as I pointed out in 1878) is probably the true site of Calvary; but this is no reason why, in the 19th century, we should repeat the errors of the 4th century and give to the world two false and impossible sites for the Holy Sepulchre instead of the one which at present represents the ‘pious fraud’ of Constantine.

“I am, sir, your obedient servant,

“C. R. CONDER.

“September 24, 1892.”

“To the Editor of the ‘Times.’

“Sir,—That Major Conder is correct in saying that the ‘Garden Tomb’ at Jerusalem has been used at some time as a place of general interment, no one of experience will for a moment deny. The great accumulation of human bones which were discovered in it at the time of its last excavation is sufficient proof of this. Possibly also he is right in conjecturing that these were the remains of Crusading pilgrims.

“But this has absolutely nothing to do with the question of the identity of the tomb. As Major Conder and every Palestinian explorer knows, it was the common practice in the time of the Crusades, as, indeed, throughout all the centuries of the Christian era, to utilise as places of interment the rock-hewn sepulchres which had been excavated ages before. And, in the present instance, supposing that Our Lord had been buried in this tomb, there was nothing to prevent Christians of the middle ages from using it as a place of interment. The ecclesiastical tradition of many centuries had already consecrated the other site; and even to consider the question of its identity would have been a heinous and unpardonable sin. Moreover, if I mistake not, there were clear indications that this tomb had already been partially filled in with *debris* before the interments of the middle ages took place, as no bones were discovered close to the flooring of the tomb. These combined circumstances would have hindered any one in the middle ages from suspecting that Christ had been buried here. As regards the rock-hewn tomb itself, I cannot agree with Major Conder

when he says that 'there is every reason to suppose that it did not exist in the time of Our Lord at all.' The existence of the head cavity in the receptacle at the north-east corner of the tomb and the fact of its facing directly to the valley of Jehoshaphat are strong arguments in favour of its being originally Jewish in its character. The absence of this head cavity in the south-east receptacle and the unfinished groove towards the north end of the west wall show clearly that the tomb was never completed. Its general appearance would lead one to believe that it was certainly of a late Jewish period, or, in other words, that it was constructed at or about the time of Christ.

"But, as I understand the feelings of those who are appealing for aid in preserving this interesting monument, there is no desire or intention upon their part to dogmatise in the matter, much less to give to the world a rival sepulchre to that 'which at present represents the pious fraud of Constantine.' They take their stand upon the fact that here is a possible, if not, indeed, a probable, spot fraught with the most sacred and hallowed associations of Christianity. The very possibility, if not probability, that the garden and tomb which are offered for purchase are those mentioned by the Sacred Evangelists should surely arouse the devout interest of Christians, and lead them to take measures for securing their immunity from desecration. There is not the slightest intention of converting them into shrines of superstitious adoration, nor of elevating them even to the position of undoubted 'holy sites.'

"Major Conder himself is a strong advocate of the claims of the skull-shaped hill, at the western base of which they lie, to be the genuine site of Calvary. And, if this be so, I cannot see how he can venture to assert that the 'Garden Tomb' is an 'impossible site' for the Sepulchre of Our Lord. The garden is 'in the place where He was crucified,' if Calvary be located here; 'in the garden' is this sepulchre, which at the time of its first occupation was evidently new, 'wherein was never man yet laid.' Granted that El-Heidhemiyeh (Jeremiah's grotto) is the scene of Our Lord's crucifixion, the Garden Tomb is the only sepulchre which has yet been discovered that will satisfy the conditions of the Biblical record. Certainly, the alternative site suggested by Major Conder utterly fails to do so, for by no stretch of language could it be said to be 'in the place where He was crucified.'

"The appeal which has been made by Mr. Henry Campbell and Mr. John Murray commends itself most heartily to my mind, and I sincerely trust that it will meet with complete success.

"HASKETT SMITH, M.A."

"To the Editor of the 'Times.'"

"Sir,—As I happened to be from home, I have only to-day seen Major Conder's letter in your issue of Saturday. May I be permitted, as one who, so far back as 1858, ventured to suggest El Heydhimiyeh, the

skull-shaped mound, as the probable site of the Crucifixion (arguing chiefly from its position as just outside the gate of Samaria, the only direct exit from the Castle of Antonine), to say a word in reply to Major Conder! No one has more ably or convincingly supported the claim of that mound as the actual site of that transcendent tragedy, and I have reason to believe that he arrived at his conclusion quite unaware that the same identification had presented itself to others. So cogent have been his arguments that, so far as I am aware, his identification has been accepted by most subsequent topographers who were untrammelled by the reception of the traditional sites.

"Now, Major Conder's Calvary being received, it follows from the Scripture narrative that the tomb must have been in its proximity. The neighbouring ground has been pretty exhaustively searched, and no other site, so far as I know, has been discovered which could possibly meet the conditions of the problem. It was in a garden near, and hewn out of the rock, and it was a hitherto unused tomb. Those of us who have suggested it as a probable site have not dogmatically asserted it to be certainly the true sepulchre: but we do say that it answers the required conditions, and to those who uphold Major Conder's identification of Calvary no other known sepulchre does so. I am sorry that Major Conder should have brought forward as an argument the fact that it was afterwards used as a place of sepulture, and that there were two red paint crosses which he places as late as the 12th century. No doubt it was so used, and I saw the crosses, but there was certainly no indication that they were contemporary with the excavating of the tomb, the date of which is certainly not of the 12th century. If Major Conder cannot prove the tomb itself to be of 12th-century work, which it certainly is not, his observation is surplusage.

"I do not pretend to rival Major Conder in architectural chronology, but he gives us no proof of his opinion that the tomb is of the 9th century A.D. I am not aware of any other such tombs ever supposed to be of so late a date in the neighbourhood of Jerusalem, and I think I have searched all known sepulchres in that district pretty carefully. Major Conder says nothing in support of his statement that 'there is every reason to suppose that it did not exist in the time of Our Lord at all.' It has no other *kokim* than this one. As the tomb of Joseph of Arimathea had never been used, there would have been no need for multiplying *kokim*. I know of no *kokim* of this character in any sepulchres whose date is so late as the 9th century. The tombs used at that period, so far as my observation goes, are invariably old tombs, though possibly partially remodelled.

"I do not dogmatise, but I do venture to submit that those who, like myself, fully accept the identification of what is called 'Conder's Calvary' are justified in pleading that what is, to say the very least, a probable site of the adjacent sepulchre should be preserved from desecration.

"I am, sir, your obedient servant,

"H. B. TRISTRAM, F.R.S.

"Durham, September 26."

“To the Editor of the ‘Times.’

“Sir,— If a number of persons choose to join together to purchase a tomb which, in their opinion, may be the Tomb of Our Lord, that is no concern of other people. But when an appeal for funds for the purpose is made in the public newspapers, and backed by an array of distinguished names, the project takes a new character, and it becomes almost a duty for those who have studied the subject to make known their views respecting it.

“That the locality north of the Damascus Gate has all the requirements for being the place of the Crucifixion can hardly be doubted. I, at least, am not prepared to question it, for it was at my suggestion that attention was given to the claims of this spot some years ago. But it should be remembered that in the 4th century the spot which has now been so long venerated was also believed to possess all the requirements. Many writers have asserted that in the time of Our Lord it was outside the city wall, the contrary has never been proved, and if this were so, the other requirements would easily fall in.

“In regarding the locality now proposed as the possible or probable site, we are, then, no nearer proof than we were before.

“And if it be assumed without proof that this locality is the true one, there is still no proof that the hill over Jeremiah’s Grotto is the exact spot. I believe it was not, for the following reasons:—

“1. If the Crucifixion had taken place on such a lofty hill, it is probable that allusion to the circumstance would have been made in the sacred narrative. The hill at that time was much more lofty than now for a person coming out of Jerusalem.

“2. I am not aware that either Jews or Romans fixed their places of execution on the summits of hills; these were rather reserved for temples and shrines. Jewish tradition points out the place of stoning at the foot of this hill, and, had the Christians believed it to have been at the top, it is fair to presume that they would have put the Church of St. Stephen there.

“3. It appears certain that the spot was near to and in full view of a frequented high road, which is not the case with the top of the hill in question. There was a road at its foot on the east and another on the west, but both seem too distant to explain the wording of the narrative. There is, indeed, now a path on the north side of the hill connecting these two roads; but in ancient times, if it existed at all, it was, in all probability, as now, a mere path, and little frequented by passers by.

“If this hill was not the site of the Crucifixion, then the tomb in question cannot be Our Lord’s Tomb.

“A far more probable site, as seems to me, and one which meets every requirement, is a rocky knoll to the west of the Damascus road, and only a few yards from it. Some ten feet below the summit of this knoll, on the side towards the road, is a remarkable ledge, or little plateau, which now has olive trees growing on it and this, I venture to

think, should be regarded as the place of the Crucifixion, if the place were in this locality. The knoll is still surrounded by 'a garden,' with vines and olive trees, but in recent years houses have been built against it and upon it on its western side. At the south end of it is the rock-cut tomb known as 'Conder's Tomb.' The knoll, the olive trees, and the tomb are all shown on the reduced plan of Jerusalem and its environs, recently published by the Palestine Exploration Fund.

"It was this tomb that I was requested about eight years ago to endeavour to purchase as being the supposed Tomb of Our Lord; and now the public are invited to subscribe for the purchase of a rival tomb! Who shall decide on the merits of the claimants?

"In my own view, the case may be stated thus:—

"If the old site is not the true one, the true one may not unreasonably be sought in the neighbourhood north of the Damascus Gate; but there is at present no proof that the old site is not the true one. I do not affirm that there is not a strong probability of its not being the true one.

"If the place of the Crucifixion were north of the Damascus Gate, it may have been on the top of the hill above Jeremiah's Grotto, or on the knoll to which I have alluded, or on neither.

"If the hill above the grotto were Calvary, 'Gordon's Tomb' may be the true one; if the little knoll were Calvary, 'Conder's Tomb' may not improbably have been the Tomb of Our Lord. But there would still be no proof on the side of either.

"It is unfortunate that the name of General Gordon should have become mixed up with this question. The glamour of his reputation tends rather to confuse the mind of the inquirer. I had the honour to know General Gordon in Jerusalem, and to spend many delightful hours in his society—hours which can never be obliterated from my memory. But great as is my admiration for that extraordinary man, I cannot pretend to regard him as an authority on Jerusalem topography.

"There is still another point which I should be sorry to pass unnoticed. Travellers in the Holy Land frequently smile at the simplicity, or otherwise, of mediæval monks in fixing the localities of events narrated in Holy Scripture, and some, perhaps, have unwisely permitted themselves to sneer at their credulity or imposture. Is it desirable that, at the end of the 19th century, we should go back to these old world ways and pay six or eight times its value for a place because it 'may be' the Tomb of Our Lord, whilst not one Christian in a million believes that it has been proved to be such?

"Your obedient servant,

"THOMAS CHAPLIN, M.D.

"18, Anerley Park, S.E.,

"September 27th."

"To the Editor of the 'Times.'

"Sir,—I trust you will allow me, as one who has made a study of the topography of ancient Jerusalem, to draw attention to one or two points that do not seem to have been sufficiently considered by your correspondents.

"There is no evidence, historical or traditional, that the hill above 'Jeremiah's Grotto,' to which the somewhat fantastic name 'Skull Hill' has been attached, was connected either directly or indirectly with the death and burial of Christ. The Russian Abbot Daniel, who visited Jerusalem A.D. 1106-7, calls this hill 'Gehenna,' and says that it split up at the time of the Crucifixion; but he is the only pilgrim who mentions the tradition, and he certainly believed implicitly in the authenticity of the traditional sites.

"There is no evidence that the 'place called Golgotha' was a hill, or even that it derived its name from a topographical feature, though that is a commonly accepted explanation. The term 'Mount (Monticulus) Golgotha,' first appears in the Itinerary of the Bordeaux Pilgrim, A.D. 333, and it was applied, not inaptly, to the 'Rock of Calvary' in the present Church of the Holy Sepulchre, which had then been recently isolated by cutting away the adjoining rock. The name 'Golgotha' may have been due to some local legend, or to some occurrence of which no record has come down to us.

"There is sufficient evidence to justify the belief that the Jewish 'Place of Stoning' was identical with, or very close to 'Skull Hill'; but this, to my mind, is a strong reason for not connecting the spot with the Crucifixion. If Our Lord had been condemned to death by the Sanhedrim, He would doubtless have been stoned at the usual Jewish place of execution. But He was condemned by Pilate, and there is no reason to believe that the Roman soldiers, who carried out the execution, departed from the usual practice, which appears to have been to crucify within a few feet of a main road. It is scarcely probable, too, that Joseph of Arimathea would have owned a garden and made himself a new tomb in close proximity to the common place of execution.

"The Biblical account of the Crucifixion gives no indication of direction; and it is uncertain whether Christ was led out to crucifixion from Herod's palace, near the Jaffa Gate, or from the Castle Antonia, at the north-west corner of the Haram-esh-Sherif. It may, perhaps, be inferred that as, in the wilderness, the sin-offering was to be burned without the camp and to the north of the altar, so Christ, the great Antitype, suffered without the walls and to the north of the altar of the Temple. This view was pressed upon me by the late Bishop Gobat whilst I was conducting the survey of Jerusalem in 1864-65; and in those days it was customary to those who aspired to identification to locate Calvary on ground due north of the site of the altar, and to the east of Jeremiah's Grotto.

"Otto Thenius was, I believe, the first to suggest the hill above Jeremiah's Grotto as a possible site for Calvary; but, though his view was adopted by some English and American writers, it never took any direct hold upon the public mind until it was strongly advocated by Major Conder and the late General Gordon. The suggestion thrown out less than 50 years ago has now almost become an accepted fact. During the last twelve months open-air services have been held on 'Mount Calvary'; a devout lady has, I am informed, washed out the 'Garden Tomb' with her own hands, and passed the night in it in silent prayer; and artists, unmindful of truth-telling photographs, have supplied the 'skull' of the nineteenth century Golgotha with eyes, nose, and mouth.

"No one can object if a number of wealthy men choose to pay ten or twelve times its value for a plot of ground outside the walls of Jerusalem. But is it fair to invite subscriptions on the plea that that plot of ground is connected with the Passion of Our Lord, when nothing can be urged in support of the view but bare possibility? The purchase of the ground will be followed by the creation of a church, and 50 years hence a later Cyril will, no doubt, be illustrating his sermons by pointing to the knoll above Jeremiah's Grotto and the 'Garden Tomb' as evidence of the Crucifixion and Resurrection of Our Lord.

I will only add that for the sum which it is proposed to expend on the purchase of the plot of ground outside the Damascus Gate it would be possible to solve several interesting points connected with the ancient topography of the Holy City.

"I am, sir, your obedient servant,

"C. W. WILSON.

"October 1st."

"To the Editor of the 'Times.'"

"Sir,—The discussion now going on in your columns upon the so-called 'Garden Tomb' of Jerusalem is naturally a subject of the greatest interest to the Committee of this Society. It is not for the Committee to take a side, or to pronounce an opinion upon any controversy on the Holy Site. It is their function to investigate and communicate facts, leaving the conclusions to be drawn by others.

"I beg, however, to call the attention of those who are interested in the subject to the papers already issued by this Society during the last few years on the Holy Sepulchre, viz., Jerusalem volume of the Survey, p. 429, *Quarterly Statements*:—

Date.	Heading.	Writer.
1873. July	Notes on Our Lord's Tomb	R. F. Hutchinson, M.D.
1876. January	Rock-Cut Tomb	Lt. C. R. Conder.
1877. July	The Holy Sepulchre	Col. Sir C. Wilson.
1877. April	The Holy Sepulchre	Clermont-Ganneau.
1879. January	Transference of Sites	W. Simpson.
1879. October	Supposed Site of Calvary... ..	Herr C. Schick.
1881. July	Tomb 200 yards west of Jeremiah's Grotto.	Lt. C. R. Conder.
1881. October-January.	The Place of Stoning	J. E. Hanauer.
1883. July	The Holy Sepulchre	Henry A. Harper.
1883. April	The Holy Sepulchre	Capt. C. R. Conder, R.E.
1885. January	Golgotha	General Gordon.
1885. April	Golgotha	Girdler Worrall.
1887. April	Notices	Guy le Strange.
1888. July	Notes on Calvary	Guy le Strange.
1888. July	Notes on Calvary	Capt. C. R. Conder, R.E.
1889. October	Notes on the Holy Sepulchre	Major Conder.
1889. July	Recent Discoveries	Herr C. Schick.
1889. April	Notes on the Plan of Jerusalem	Herr C. Schick.
1889. January	Holy Sepulchre and Dome of Rock	William Simpson.
1890. April	Site of Calvary	Professor Hull.
1891. July	The Holy Sepulchre	Major Watson, R.E.
1891. April	Entrance to the Holy Sepulchre	William Simpson.
1891. January	On the Site of the Holy Sepulchre	Henry Gillman.
1892. April	'Gordon's Tomb'	Herr C. Schick.
1892. July	On the Identification of Calvary... ..	J. E. Hanauer.
1892. October	Notes on the controversy regarding the Site of Calvary.	J. E. Hanauer.

"I would also point out that when an officer of experience and long study of this subject, such as Major Conder, pronounces a tomb to be of any century, it is a judgment representing not an individual opinion, but the accumulated knowledge amassed during 27 years of scientific examination of the tombs and other monuments of Palestine. (See Papers on the rock tombs of Western Palestine in 'The Special Papers' volume of the Survey, p. 280.)

"I would also point out that when Dr. Chaplin, who is a member of the Executive Committee, writes on Jerusalem and its monuments he brings to the subject the results of a patient study carried on during 25 years' residence in the city.

"I am, sir, your obedient servant,

"JAMES GLAISHER,

"*Chairman of the Executive Committee.*

"Palestine Exploration Fund, 24, Hanover-Square, W.,

"October 5th."

"Leading Article from the 'Times' of October 8th.

"An interesting controversy has been going on for some time back in our columns, originating in the proposal to raise a fund for the purchase of what is known as the 'Garden Tomb,' outside the Damascus Gate at Jerusalem. We published about a fortnight ago a letter from Mr. Campbell and Mr. John Murray acting as secretaries to a committee

formed to promote this object, explaining that the monument in question, commonly known as 'Gordon's Tomb,' from the fact that General Gordon and many other enthusiastic persons believed it to be the Holy Sepulchre itself, was now in the market and was to be obtained for a sum of 6,000*l.*, two-thirds of it to be paid for the freehold to the actual proprietor, a shrewd German speculator, and one-third for legal and other incidental expenses, including the maintenance of the property. The case for the purchase was stated with laudable moderation. 'The probability,' it was argued, 'that this tomb may be the Holy Sepulchre renders it very desirable that it should be preserved from destruction or desecration.' No attempt was made, indeed, to show that either destruction or desecration was threatened, and, in point of fact, one of the most energetic advocates of the purchase, Mr. Haskett Smith, has contended that the owner's offer of the tomb ought to be closed with immediately, 'since the Franciscan monks have made a bid for it and the Germans are prepared to buy it forthwith.' The appeal is addressed, however, to a deeply-rooted and reverential form of sentiment, and it is in no way surprising that it has been supported by the Archbishop of Canterbury, several Bishops and other high ecclesiastical personages, as well as others interested as scholars or travellers in the archaeology of the Holy Land. At the same time, these eminent authorities, while giving their approval to the movement for raising the purchase-money by public subscription, have exercised a wise discretion in expressly refraining, as the secretaries have told us, from 'committing themselves to any confident opinion as to the identity of this tomb with the Holy Sepulchre.'

"The wisdom of this reservation, though it obviously weakens the force of the appeal, has since been made evident. Major Conder, whose work in connection with the survey of the Holy Land and the Palestine Exploration Committee is well known, wrote to express a strong opinion adverse to the suggested identity. He contended that there was no reason to suppose that the tomb was even of Jewish origin or of the period assigned to it, but that, on the contrary, the evidence of its workmanship and ornamentation rather showed that it belonged to the Byzantine period, and was used as a place of sepulture for pilgrims in the Crusading times. While admitting that it was near the probable site of Calvary—the skull-shaped hill, the identification of which is, however, itself a moot point—Major Conder protested against adding a new and more than dubious rival to the spurious 'Holy Place' which at present represents the 'pious fraud' of Constantine. Mr. Haskett Smith, Mr. Campbell, Canon Tristram, and others attacked Major Conder's position with a good deal of animation and a curious display of the 'wish to believe.' Upon their own showing they have only a tissue of vague and speculative possibilities to oppose to the emphatic negative testimony of Major Conder, supported by such high authorities in the domain of sacred exploration and archaeology as Sir Charles Wilson, Dr. Chaplin, and Mr. Glaisher. Mr. Haskett Smith thinks it sufficient to contend that the ground now offered for sale is 'a possible, if not a probable, spot' on

which to seek for the site of the Holy Sepulchre. Mr. Campbell says it is not alleged that the tomb is the Holy Sepulchre, but that 'it may be so.' Canon Tristram urges that it 'answers the required conditions,' which is true if we accept other disputed identifications and build a superstructure of conjectures upon them. One enthusiastic gentleman considers 6,000*l*. 'a small price to pay for a hallowed spot' on the assumption that, even if the identity of the tomb be doubtful, what more probable than that the ground now for sale may be the 'original Garden'? Another regards every piece of land that can be identified as near Calvary as 'an object of the deepest interest, if not of priceless value,' which ought to be secured. When the question of purchase is looked at in this light it is easy to understand how the Garden Tomb, which Mr. Hanbury might have had a few years ago for 1,200*l*., and which he was about to buy under the glamour of General Gordon's faith, when the improbabilities of the identification were placed before him, stands at five times that price at present in the hands of Herr Frutiger.

"The advocates of the expenditure of 6,000*l*., which, as Sir Charles Wilson points out, there are many ways of using to good purpose in the exploration of Jerusalem, have nothing to rely upon except guesswork, yet they assert that Major Conder has not proved his case. Absolute proof in such matters as archaeological chronology is not to be expected, but the conclusions arrived at by a high authority like Major Conder, though they are only in strictness inferential, represent, as Mr. Glaisher has remarked, the accumulated knowledge amassed during years of patient toil and study. The exploration of the Holy Places has been undertaken in a serious spirit and carried out with eminent success. It is a pity that attention should be diverted from it, on palpably insufficient grounds, by enthusiasts bent on 'restoration,' and Mr. Floyer has spoken severely of 'the sentimental and antiquarian ruin' of places historically interesting in the impassioned hunting down of sites and the multiplication of wildly conjectural 'discoveries.' In the present case while we respect the feelings that inspired the promoters of the movement, we are constrained to say that they seem to have shown no adequate grounds for their appeal for public aid."

LECTURERS.

The authorised lecturers for the Society are—

The Rev. THOMAS HARRISON, F.R.G.S., Member of the Society of Biblical Archæology, Hillside, Benenden, Staplehurst, Kent. His subjects are as follows:—

- (1) *Research and Discovery in the Holy Land.*
- (2) *In the Track of the Israelites from Egypt to Canaan.*
- (3) *Bible Scenes in the Light of Modern Science.*
- (4) *Eastern Palestine.*
- (5) *The Dead Sea and the Cities of the Plain.*

The Rev. J. LLEWELYN THOMAS, M.A., Briton Ferry, Glamorganshire, South Wales. His subjects are as follows:—

- (1) *Explorations in Judea.*
- (2) *Research and Discovery in Samaria and Galilee.*
- (3) *In Bible Lands; a Narrative of Personal Experiences.*
- (4) *The Reconstruction of Jerusalem.*
- (5) *Problems of Palestine.*

Professor THEODORE F. WRIGHT, Ph.D., Cambridge, Mass., Honorary General Secretary of the Palestine Exploration Fund for the United States. His subjects are as follows:—

- (1) *The Building of Jerusalem.*
- (2) *The Overthrow of Jerusalem.*
- (3) *The Progress of the Palestine Exploration.*

The Rev. L. G. A. ROBERTS, Hudson Parsonage, Province Quebec, Canada. His subjects are as follows:—

- (1) *Work in and around the Holy City.*
- (2) *Work outside the Holy City.*
- (3) *Popular Lecture upon the General Results obtained by the Fund.*

Application for Lectures may be either addressed to the Secretary, 24, Hanover Square, W., or sent to the address of the Lecturers.

THE PALESTINE EXPLORATION FUND.

NOTES AND NEWS.

Mr. Bliss's report of his latest excavations at Tell el Hesi will be found in the present number. The Executive Committee have applied to the Sublime Porte for a firman for excavating elsewhere.

Though no more tablets with cuneiform inscriptions have come to light at Tell el Hesi, discoveries of great interest have been made there, such as lamps, inscribed pottery, weapons, &c. One of the most interesting and important discoveries is a smelting furnace *for iron*, attributed by Mr. Bliss to 1400 B.C., which shows that working in iron was well known to the people of that country at a very early period, as indicated in Judges i, 19, and other passages in the Bible.

The Committee gratefully acknowledge the liberal support hitherto extended to their efforts in carrying out these excavations, and trust that all interested in unravelling the past history of the Holy Land will continue to contribute towards this promising field of inquiry.

No one knows more about "underground Jerusalem" than Mr. Baurath Schick. He has lived, studied, and worked in the Holy City for more than 40 years, and it will doubtless interest subscribers to read the history of his opinions respecting the site of Calvary which is published in this issue of the *Quarterly Statement*. A paper by Mr. Schick on the course of the second wall is in type, but postponed till next quarter in consequence of the non-arrival of the plan which is to illustrate it.

On January 24-5th a violent storm of wind amounting to a "real hurricane" occurred at Jerusalem, doing much damage to houses, trees, &c. There was also a heavy fall of snow, so that the traveller in the mountains "might think himself to be in Switzerland." The railway, which had been injured by the heavy autumnal rains, is again in working order, and the trains run regularly to and from Jaffa.

The Executive Committee having heard with deep regret of the sudden death, at Chicago, of Colonel G. E. Grover, R.E., who was formerly a Member of the Executive Committee, and had rendered important service to the Fund, it was unanimously resolved at their meeting on February 7th, that a letter of condolence be sent to Mrs. Grover on her sad and sudden bereavement.

The following is, by permission, reprinted from the "Journal of the Society of Arts," for March 3rd :—

THE LATE COLONEL GROVER.

The following letter, containing a resolution passed at a meeting of Foreign Commissioners and officers of the Chicago Exhibition, has been received :—

World's Columbian Exposition,
January 31, 1893.

Sir Henry Trueman Wood,
*Secretary, Royal Commission of Great Britain,
for the World's Columbian Exposition.*

My Dear Sir,—I have the honour to inform you that a meeting was held in the Department of Foreign Affairs, Jackson Park, at noon to-day, all the Commissioners of foreign countries and the officials of the Exposition being present. The Director-General presided, and the Secretary of the Department recorded.

Addresses of affection and regret were made by the Director-General, the Honourable Walker Fearn, Chief of Foreign Affairs, and the Honourable Adolf Wermuth, Imperial German Commissioner, and, as expressing the sense of the meeting, the following was adopted :—

"It having pleased Almighty God to remove from our midst our late associate, Colonel George Edward Grover, of the Royal Engineers, the Official Representative of the British Commission to the World's Columbian Exposition, we desire to record our appreciation of the worth and high character of this distinguished gentleman; of his brilliant abilities as an executive officer, and of his singularly lovable personality; and we tender to the Royal Commission the assurance of our deep sense of the common loss, and to his afflicted widow and family our heartfelt sympathy and lasting condolence."

It was decided to attend the funeral in a body, and the meeting adjourned.

I have the honour to be,

Your most obedient servant,

(Signed) RICHARD LEE FEARN, *Secretary,
Department of Foreign Affairs.*

The Rev. Theodore E. Dowling, Hon. Sec. for Jerusalem, during his late trip through Australasia, acting on behalf of the Committee, has secured the services of the following gentlemen as Honorary Secretaries in Australia, Tasmania and New Zealand :—

Hon. Sec. for Southern District, New South Wales, the Rev. Alfred George Stoddart, Southern Forrest, N.S.W.; Hon. Sec. for Tasmania, Major Ernest

Townshend Wallach, General Staff, Tasmanian Forces, Head-quarters Office, Hobart; Hon. Sec. for Oamaru, Province of Otago, New Zealand, the Rev. Frank Seth-Smith; Hon. Sec. for Nelson, New Zealand, Colonel Branfil.

Travellers and others will please note that maps, books, &c., can be obtained at the Rooms of the Jerusalem Association of the Fund, Jerusalem. Rev. T. E. Dowling, Hon. Sec.

After two years' study of the published texts of the tablets found at Tell Amarna, Major Conder has completed a translation of them which the Committee of the Fund have published. In this, as in all their publications, the Committee beg it to be understood that the author alone is responsible for the opinions put forward.

The Committee have appointed the Rev. Professor Theodore Wright, Hon. General Secretary to the Fund in the U.S.A., to be their representative at the Chicago Exhibition.

The following may be had on application to the Assistant Secretary at the Office of the Fund, viz. :—

Casts of the Tablet with a Cuneiform Inscription found at Tell el Hesi, price 2s. 6d. each.

Casts of the Ancient Hebrew Weight brought by Dr. Chaplin from Samaria, price 2s. 6d. each.

Casts of an Inscribed Weight or Bead from Palestine, forwarded by Professor Wright, Cambridge, Mass., U.S.A., price 1s. each.

Photographs of Tell el Hesi, showing the excavations, price 1s. each.

The following gentlemen have kindly consented to act as Honorary Local Secretaries: The Rev. J. M. Otto Greensboro, Ala., U.S.A.; The Rev. S. F. Maynard, Gressingham Vicarage, Lancaster; The Rev. G. G. S. Thomas, 2, Princess Terrace, Ripon; The Rev. P. A. Gordon Clark, West Free Church, Perth; The Rev. J. T. Barber, Falls Church, Va., U.S.A.; The Rev. Frank P. Miller, Litchfield, Ill., U.S.A.

The first portion of M. Clermont-Ganneau's work on his Archæological Mission is in the hands of the translator.

The new railway from Jaffa to Jerusalem has been laid down on the three sheets of the large map. Scale 1 inch = 1 mile. Copies of these sheets are now ready. Price to subscribers to the work of the Fund, 2s. each; non-subscribers 2s. 6d.

The museum of the Fund, at 24, Hanover Square, is now open to subscribers between the hours of 10 a.m. and 5 p.m., except on Saturdays, when it closes at 2 p.m.

The Committee have to acknowledge with thanks the following donations to the Library of the Fund :—

- “The Holy City, Jerusalem, its Topography, Walls, and Temples.” By the Author, S. Russell Forbes, Ph.D.
 “Forty Days in the Holy Land.” By the Authoress, Elizabeth Harcourt Mitchell.
 “The Everlasting Nation.” (In 4 vols). By the Editor, Rev. A. A. Isaacs. M.A.
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The Committee will be glad to receive donations of Books to the Library of the Fund, which already contains many works of great value relating to Palestine and other Bible Lands. Owing to want of space the list of Books in the Library of the Fund has had to be postponed.

It may be well to mention that plans and photographs alluded to in the reports from Jerusalem and elsewhere cannot all be published, but all are preserved in the offices of the Fund, where they may be seen by subscribers.

The third and revised edition of “Heth and Moab” is now ready.

A new edition of “Twenty-one Years’ Work” is in course of preparation and will be brought down to date. The new title will be “Twenty-seven Years’ Work.” The Index to the *Quarterly Statements* is being brought down to date.

The first volume of the “Survey of Eastern Palestine,” by Major Conder, is accompanied by a map of the portion of country surveyed, special plans, and upwards of 350 drawings of ruins, tombs, dolmens, stone circles, inscriptions, &c. The first 250 subscribers pay seven guineas for the three volumes; subscribers to the “Survey of Western Palestine” are privileged to have the volumes for this sum. The price will be raised, after 250 names are received, to twelve guineas. The Committee are pledged never to let any copies be subscribed for under the sum of seven guineas. Mr. A. P. Watt, 2, Paternoster Square, is the Sole Agent. The attention of intending subscribers is directed to the announcement in the fore part of this number.

Mr. H. Chichester Hart’s “Fauna and Flora of Sinai, Petra, and the Wady ‘Arabah” has been completed and sent out to subscribers.

The books now contained in the Society’s publications comprise an amount of information on Palestine, and on the researches conducted in the country, which can be found in no other publications. It must never be forgotten that no single traveller, however well equipped by previous knowledge, can compete with a scientific body of explorers, instructed in the periods required, and provided with all the instruments necessary for carrying out their work. The books are the following (*the whole set (1 to 7 and 9 to 18) can be obtained by*

subscribers to the Fund on application to the Head Office only (24, Hanover Square, W.), for £3 10s. Od., carriage paid to any part in the United Kingdom only):—

By Major Conder, R.E.—

- (1) "Tent Work in Palestine."—A popular account of the Survey of Western Palestine, freely illustrated by drawings made by the author himself. This is not a dry record of the sepulchres, or a descriptive catalogue of ruins, springs, and valleys, but a continuous narrative full of observations upon the manners and customs of the people, the Biblical associations of the sites, the Holy City and its memories, and is based upon a six years' experience in the country itself. No other modern traveller has enjoyed the same advantages as Major Conder, or has used his opportunities to better purpose.
- (2) "Heth and Moab."—Under this title Major Conder provides a narrative, as bright and as full of interest as "Tent Work," of the expedition for the *Survey of Eastern Palestine*. How the party began by a flying visit to North Syria, in order to discover the Holy City—Kadesh—of the children of Heth; how they fared across the Jordan, and what discoveries they made there, will be found in this volume.
- (3) Major Conder's "Syrian Stone Lore."—This volume, the least known of Major Conder's works, is, perhaps, the most valuable. It attempts a task never before approached—the reconstruction of Palestine from its monuments. It shows what we should know of Syria if there were no Bible, and it illustrates the Bible from the monuments.
- (4) Major Conder's "Altaic Inscriptions."—This book is an attempt to read the Hittite Inscriptions. The author has seen no reason to change his views since the publication of the work.
- (5) Professor Hull's "Mount Seir."—This is a popular account of the Geological Expedition conducted by Professor Hull for the Committee of the Palestine Fund. The part which deals with the Valley of Arabah will be found entirely new and interesting.
- (6) Herr Schumacher's "Across the Jordan."
- (7) Herr Schumacher's "Jaulân."—These two books must be taken in continuation of Major Conder's works issued as instalments of the "Survey of Eastern Palestine." They are full of drawings, sketches, and plans, and contain many valuable remarks upon manners and customs.

By Walter Besant, M.A.—

- (8) "The Memoirs of Twenty-one Years' Work."—This work is a popular account of the researches conducted by the Society during the twenty-one years of its existence.
- (9) Herr Schumacher's "Kh. Fahil." The ancient Pella, the first retreat of the Christians; with map and illustrations.

By George Armstrong—

- (10) *Names and Places in the Old and New Testament and Apocrypha.* This is an index to all the names and places mentioned in the Bible and New Testament, with full references and their modern identifications, as shown on the new map of Palestine.
- (11) Besant and Palmer's "*History of Jerusalem.*"—The "*History of Jerusalem,*" which was originally published in 1871, and has long been completely out of print, covers a period and is compiled from materials not included in any other work, though some of the contents have been plundered by later works on the same subject. It begins with the siege by Titus and continues to the fourteenth century, including the Early Christian period, the Moslem invasion, the mediæval pilgrims, the Mohammedan pilgrims, the Crusades, the Latin Kingdom, the victorious career of Saladin, the Crusade of Children, and many other little-known episodes in the history of the city and the country.
- (12) Northern 'Ajlûn "*Within the Decapolis,*" by Herr Schumacher.

By Henry A. Harper—

- (13) "*The Bible and Modern Discoveries.*"—This work, written by a Member of the Executive Committee of the Palestine Exploration Fund, is an endeavour to present in a simple and popular, but yet a connected form, the Biblical results of twenty-two years' work of the Palestine Exploration Fund. The writer has also availed himself of the discoveries made by the American Expeditions and the Egyptian Exploration Fund, as well as discoveries of interest made by independent travellers.

The Bible story, from the call of Abraham to the Captivity, is taken, and details given of the light thrown by modern research on the sacred annals. Eastern customs and modes of thought are explained whenever the writer thought that they illustrated the text. This plain and simple method has never before been adopted in dealing with modern discovery.

To the Clergy and Sunday School Teachers, as well as to all those who love the Bible, the writer hopes this work will prove useful. He is personally acquainted with the land; nearly all the places spoken of he has visited, and most of them he has moreover sketched or painted. It should be noted that the book is admirably adapted for the School or Village Library.

By Guy le Strange—

- (14) "*Palestine under the Moslems.*"—For a long time it had been desired by the Committee to present to the world some of the great hoards of information about Palestine which lie buried in the Arabic texts of the Moslem geographers and travellers of the Middle Ages. Some few of the works, or parts of the works, have been already translated into Latin, French, and German. Hardly anything has been done with them in English, and no attempt has ever been made to systematise, compare, and annotate them.

This has now been done for the Society by Mr. Guy le Strange. The work is divided into chapters on Syria, Palestine, Jerusalem, and

Damascus, the provincial capitals and chief towns, and the legends related by the writers consulted. These writers begin with the ninth century and continue until the fifteenth. The volume contains maps and illustrations required for the elucidation of the text.

The Committee have great confidence that this work—so novel, so useful to students of mediæval history, and to all those interested in the continuous story of the Holy Land—will meet with the success which its learned author deserves.

By W. M. Flinders Petrie—

- (15) "Lachish" (one of the five strongholds of the Amorites).—An account of the excavations conducted by Mr. Petrie in the spring of 1890, with view of Tell, plans and sections, and upwards of 270 drawings of the objects found.

By Trelawney Saunders—

- (16) "An Introduction to the Survey of Western Palestine, describing its Waterways, Plains, and Highlands, with special reference to the Water Basin—(Map. No. 10)."
- (17) "The City and the Land."—A course of seven lectures on the work of the Fund.
- (18) "The Tell Amarna Tablets," including the one found at Lachish. By Major C. R. Conder, D.C.L., R.E.

The new Map of Palestine embraces both sides of the Jordan, and extends from Baalbek in the north to Kadesh Barnea in the south. All the modern names are in black; over these are printed in red the Old Testament and Apocrypha names. The New Testament, Josephus, and Talmudic names are in blue, and the tribal possessions are tinted in colours, giving clearly all the identifications up to date. It is the most comprehensive map that has been published, and will be invaluable to universities, colleges, schools, &c.

It is published in 21 sheets, with paper cover; price to subscribers to the Fund, 24s.; to the public, £2. It can be had mounted on cloth, rollers, and varnished for hanging. The size is 8 feet by 6 feet. The cost of mounting is extra (*see Maps*).

In addition to the 21-sheet map, the Committee have issued as a separate Map the 12 sheets (*viz.*, Nos. 5-7, 9-11, 13-15, 20-22), which include the whole of Palestine as far north as Mount Hermon, and the districts beyond Jordan as far as they are surveyed. *See key-map to the sheets.*

The price of this map, in 12 sheets, in paper cover, to subscribers to the Fund, 12s. 6d.; to the public, £1 1s.

The size of the map, mounted on cloth and roller for hanging, is 4½ feet by 6¾ feet.

Any single sheet of the map can be had separately, price, to subscribers of the Fund, 1s. 6d. Mounted on cloth to fold in the pocket suitable for travelling, 2s. To the public 2s. and 2s. 6d.

Single copies of these maps in sheets, with cover, can be sent by post to all foreign countries at extra charge of 1s.

A copy of names and places in the Old and New Testament, with their modern identifications and full references, can be had by subscribers with either of these maps at the reduced price of 2s. 6d.

The first and second parts, Vol. I., of "Felix Fabri," were issued to subscribers to the Pilgrim's Text Society in May and July of last year. Parts I and II, Vol. II, of the same work are in the press. The account of "Saewulf's Pilgrimage to Jerusalem and the Holy Land" (1102 A.D.) has also been published by the same Society.

Branch Associations of the Bible Society, all Sunday School Unions within the Sunday School Institute, the Sunday School Union, and the Wesleyan Sunday School Institute, will please observe that by a special Resolution of the Committee they will henceforth be treated as subscribers and be allowed to purchase the books and maps (by application only to the Secretary) at reduced price.

The income of the Society, from September 19th, 1892, to March 21st, 1893, was—from annual subscriptions and donations, including Local Societies, £1,264 9s. 7d.; from all sources—£1,644 12s. 5d. The expenditure during the same period was £1,312 15s. 11d. On March 22nd, the balance in the Bank was £620 16s. 9d.

Subscribers are requested to note that the following can be had by application to the office, at 1s. each:—

1. Index to the *Quarterly Statement*, 1869–1880.
 2. Cases for binding Herr Schumacher's "Jaulân."
 3. Cases for binding the *Quarterly Statement*, in green or chocolate.
 4. Cases for binding "Abila," "Pella," and "'Ajlûn" in one volume.
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Back numbers of the *Quarterly Statement*.—In order to make up complete sets, the Committee will be very glad to receive any of the following numbers:—

No. II, 1869; Nos. VI and VII, 1870; No. III, 1871; January and April, 1872; October, 1873; January, 1874; January and October, 1875; January, 1883, and January, 1886.

It having been reported to the Committee that certain book hawkers are representing themselves as agents of the Society, the Committee have to caution subscribers and the public that they have no book hawkers in their employ, and that none of their works are sold by itinerant agents.

While desiring to give every publicity to proposed identifications and other theories advanced by officers of the Fund and contributors to the pages of the *Quarterly Statement*, the Committee wish it to be distinctly understood that by publishing them in the *Quarterly Statement* they neither sanction nor adopt them.

Subscribers who do not receive the *Quarterly Statement* regularly are asked to send a note to the Secretary. Great care is taken to forward each number to all who are entitled to receive it, but changes of address and other causes give rise occasionally to omissions.

BALANCE SHEET FOR THE YEAR ENDING 31st DECEMBER, 1892.

RECEIPTS.		EXPENDITURE.	
	£ s. d.		£ s. d.
To Balance in Bank 31st December, 1891—			
Net Balance	£297 0 9	By Exploration	853 6 7
Subscriptions paid in advance		Printing and Binding, including the <i>Quarterly Statement</i>	613 12 1
on account of 1892	17 5 6	Maps, Lithographs, Photographs, Slides, Casts, and Illustrations	224 17 7
		Management, including Rent, Salaries, Wages, Advertising, Insurance, Stationery, and Sundries	665 10 2
Donations and Subscriptions	314 6 3	Postage and Carriage of <i>Quarterly Statements</i> , Books, Maps, Parcels, &c.	133 6 9
Proceeds of Lectures	1,690 14 6	Subscriptions paid in 1892 in advance for 1893	£23 0 10
Sales of Maps	104 9 3	Net Balance	390 10 1
Sales of Memoirs of Eastern and Western Survey of Palestine and other Books published by the Society	183 14 9		
Sales of Photographs, Slides, and Casts	426 2 8	Balance in Bank and cash in hand 31st December, 1892	413 10 11
Amount of Insurance on Books paid by the Northern Insurance Company for loss and damage by fire	34 16 8		
	150 0 0		
	<u>£2,904 4 1</u>		<u>£2,904 4 1</u>

Examined and found correct,
W. MORRISON, *Treasurer*.

TREASURER'S STATEMENT.

It will be seen that the total expenditure on exploration was £853 6s. 7d. The very heavy sums paid for printing, binding, maps, lithographs, illustrations, photographs, &c., for the most part represents books and maps published by and sold by the Fund, and the *Quarterly Statement* distributed among the subscribers gratuitously.

In the statement of assets and liabilities, it will be seen that a large amount of these publications, for nearly all of which there is a steady demand, remains on hand.

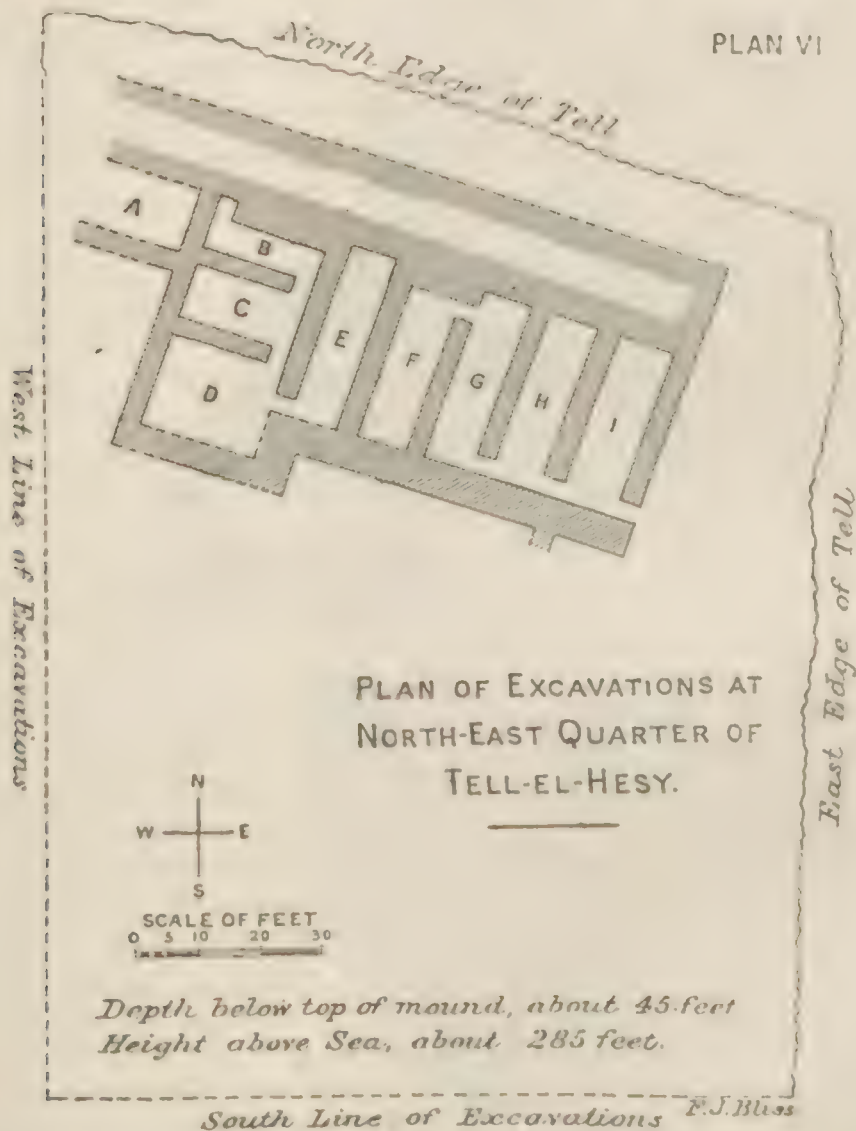
ASSETS.				LIABILITIES.			
	£	s.	d.		£	s.	d.
Balance in Bank.. ..	413	10	11	Printing, Lithographing,			
Stock of Books, Maps,				Rent, and Current Ex-			
Photos, &c., on hand..	1,500	0	0	penses	527	8	1
Surveying Instruments..	100	0	0	Exploration.			
Show Cases, Furniture							
and Fittings	100	0	0				
In addition to the above							
there is the valuable							
and unique collection of							
antiques, models, &c.							

W. MORRISON,
Treasurer.

REPORT OF THE EXCAVATIONS AT TELL EL HESY DURING THE AUTUMN OF 1892.

By FREDERICK JONES BLISS, B.A.

THE actual work of excavation was resumed on September 27th. When the season closed in June we were working in the 5 feet of stuff below the great Ash-bed. It was here that the tablet was found. A series of rooms along the north wall was left only partly explored at the end of



the season. These we found quite untouched in the autumn, and our first work was to clear them out. They are shown on Plan VI. They belonged to some large public structure which I take to be a fort, from the symmetry of the rooms, and from the fact that they were on the great wall at least 17 feet thick. The walls were preserved only 2 or

3 feet above the door-sills. The rooms will be seen to connect with doors, 3 feet wide. The wall between E and F was much ruined, and we may infer a door, though it was not actually detected. The part of the Tell between this building and the east edge was very much ruined. I think that doubtless the building continued further east. It was a most melancholy job to clear out room after room of its fallen brick, and find absolutely nothing, even broken potsherds being very scarce. The building, by its level and by its relation to the Bed of Ashes, being just below this, evidently belongs to the time of the tablet. Was it the "Governor's Palace"? Was one of its seven large rooms once the "Archive Chamber"? Tormenting questions! For either the place was suddenly destroyed by the enemy who searched the rooms for everything valuable or without value, or else it fell into natural decay, and the inhabitants in moving to other quarters took with them all their possessions, leaving no trace. The former is more probable, as the place

53



where the tablet was found (not far from the east edge, towards the north), was a mixture of ruin and burning. That other tablets once existed in the Tell is probable. That they were carried away when the eastern part of the Tell was worn away by the encroaching of the stream is possible. That a few may still lie scattered in the heart of the Tell, in the two-thirds of the town yet standing under the Ash-bed, is also possible. But that the ruined condition of the one-third of this town which I have thoroughly examined should forbid us to hope for anything like an untouched archive chamber or collection of tablets in the remaining two-thirds is strongly my opinion.

The tablet dates this town at 1400 B.C., and a scarab of Amenhotep III confirms the date. The Phœnician pottery still appeared, though the lamps were found but very rarely. The pointed-bottom juglets belong to this period, and are not found more than a couple of centuries later. We found a small slab in pottery with a female figure in low relief, similar to the idol figured in my last report, and assigned to about 1100 B.C., save that it had a head-dress coming down to the neck, and then curling up in a scroll. I have sent a cast.

Directly under this town were the ruins of another, which, from the depth of accumulation and other indications, could not have been much earlier. We may date it at about 1450 B.C. It is given on Plan VII, though the rooms between the letters I J K L probably belong to an



GENERAL VIEW OF TELL EL HESI, SHOWING THE EXCAVATIONS. (From a Photograph.)

earlier period, say, 1500. Near the wall C D we found the interesting bit of Aegean pottery (Fig. 53) with the painted bird. Dr. Petrie found Aegean pottery of this same date at Tell el Amarna. The colours are red, yellow, and black. In general, the pottery of this period was not

characteristic. The salient features of Amorite pottery had not come in to any prevailing extent, and the majority of sherds, if found alone in another place, would not have furnished a clue to date. The opponents of the theory that levels may be dated by rough pottery probably have this sort of sherds in mind. But what shall be said to the sudden change when we reach the levels just below those figured in Plan VII? Here the ledge-handles, peculiar spouts, comb-facing, thick-brimmed bowls, black-brown smutty surfaces, come in as controlling types, types appearing but not prevailing in the Tell above, and not recognised by that careful observer, Prof. Petrie, in any country. The tablet dates these lower periods at about 1600-1700 B.C. Individual shapes may appear and reappear centuries after their first use, but in this so-called Amorite pottery we have a half-dozen peculiarities of shape and facing, and when all these peculiarities occur together in an undated place, common sense would naturally assign the place to about the seventeenth century B.C. Another case of distinctive pottery occurs in the enormous Greek loop-handles, 500-700 B.C. To find a single loop-handle would not be conclusive in dating a place, but to find in connection with it the peculiar-ribbed bowls, and broad-brimmed open lamps characteristic of the period would greatly increase the probability that such a place should be dated not far from the seventh century B.C.

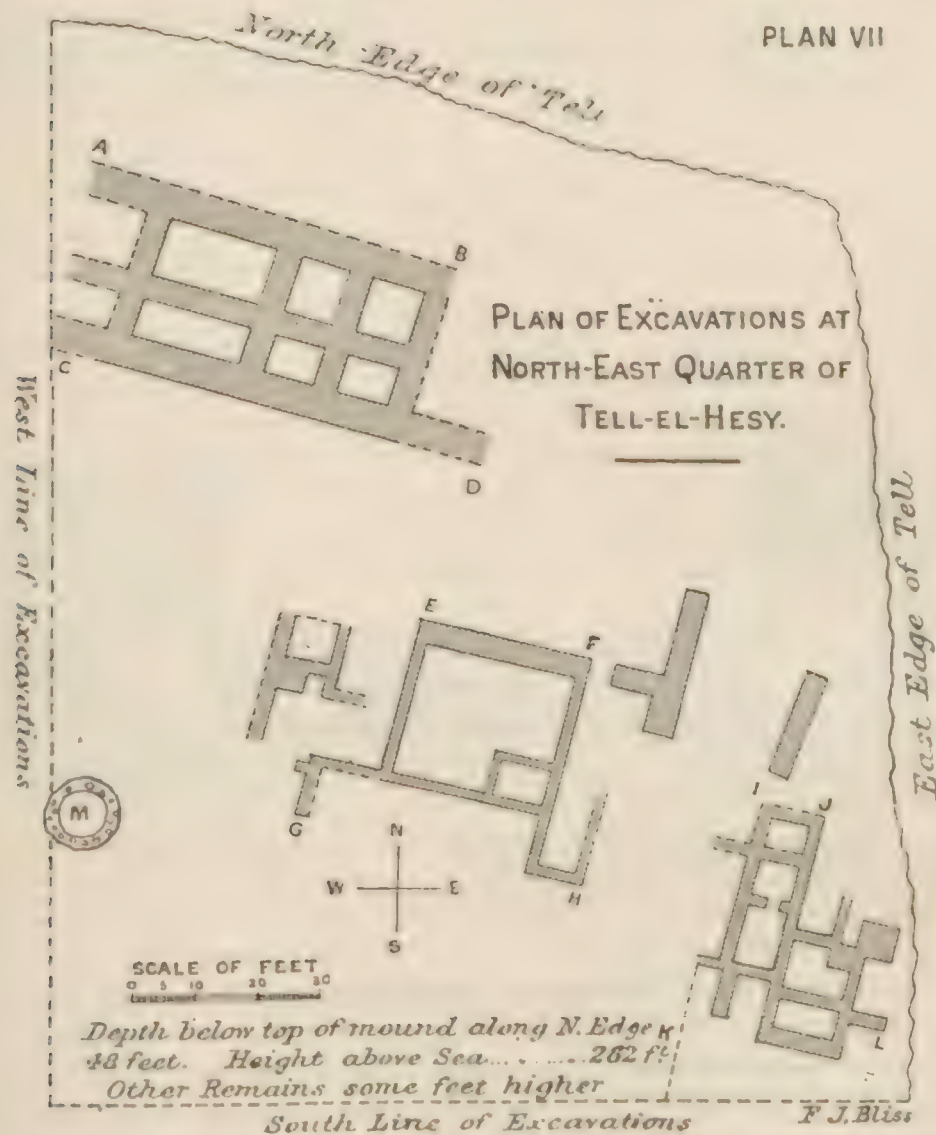
Along with the uncharacteristic pottery of the town there were specimens of the Phœnician ware. What seemed to be the earliest was a group containing a bowl and a pointed-bottom juglet to be dated about 1500 B.C.

A singular case of reappearance was found in this town. In my report for the Spring Season of 1891 I spoke of clay weavers' weights found at the level to be dated 800-600 B.C. They then were seen no longer till we came to this level, some 800 years earlier.

I now come to what may turn out to be one of the most interesting discoveries we have made. On Plan VII may be seen the circular place M; as this part of the Tell had been very little occupied before the period of the Ashes, I cannot say whether M belongs to this plan or to Plan VI, but as the Ash-bed extended over it, though not thickly, we may date it no later than 1400 B.C. It was a roughly-circular structure, with a diameter from outer wall to outer wall of about 12 feet; the walls were about 2 feet thick, leaving the chamber a diameter of 7 feet. The walls were of mud, with some rough stones inserted, and remained standing to a height of 4 feet. As all down through the Tell we have never (with the exception of the great corner tower of the Amorite forts) found more than one-fourth of the probable original height of walls left standing, and usually much less, we may infer that the building was originally at least 15 feet high. On the top of these walls appeared holes, descending in the walls to an apparent depth varying from 1 to 3 feet. One hole was bell-shaped. Some were in the centre of the walls; others, near the inner and outer edges; their diameter at the top varied from 2 to 4 inches. From the outer solid face of the walls it was

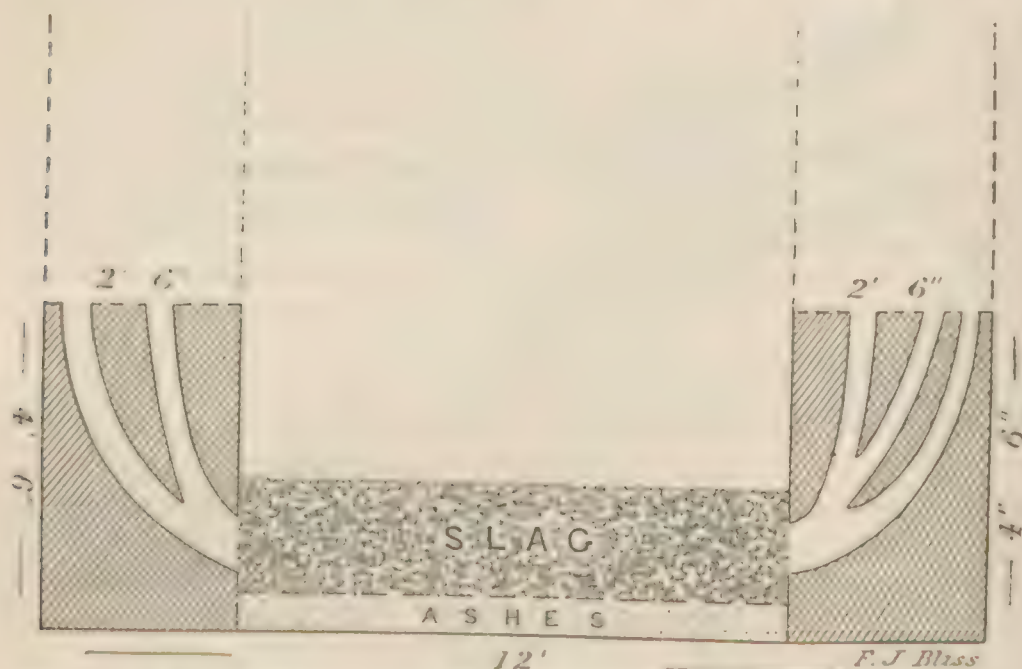
apparent that they had no outlet to the outside. The holes were lined with a grayish-green deposit, and under this the brick was burned red for an inch under the surface. The floor of the chamber was of mud-brick. On this was a bed of ashes, and on the ashes a lot of broken stuff, burned brick on one side, and a coloured glaze on the other.

This accumulation of ashes and stuff was 2 feet deep. The rest of the chamber was filled with fallen earth. About 1 foot from the floor there



were openings into the walls. On destroying the walls we found that these openings were outlets of the above-mentioned passages. We followed three such passages, and found that each passage ramified into two or three branches which led upwards. When we first observed these holes from the top, my foreman, Yusuf, declared that we were to expect this intricate mechanism of connecting passages. I was very sceptical, for his theory would involve the idea that the builders had

arranged these complicated passages during the course of construction, a most delicate and difficult work, involving an accuracy hardly to be expected in this rude period, but the destruction of the building proved his theory correct. As I have said, we actually followed the passages from the inner chamber up through the walls to the outlets above. On the south side there seemed to have been an opening into the inner chamber from without, but so much ruined that I could only guess that it was 2 or 3 feet wide and a foot or two high. Directly outside, and on a lower level, were signs of a pit. These are the facts regarding this interesting structure. At first I took it for a place for baking pottery, but the development of its excavation, and a visit to the pottery ovens of Gaza, showed



SECTION OF BLAST-FURNACE
1400-1500 B.C.

this to be impossible. In my last report I referred to it as a place for treating alkali plants. However, I kept specimens of the stuff taken from the chamber, and asked Dr. Adams, our Professor of Chemistry at the College here in Beirut, to analyse it. He at once pronounced it slag, and the structure a smelting furnace. To my surprise, analysis of four bits of the slag proved the presence of iron and silicon, and no trace of copper. I also handed to Professor Adams for analysis a piece off a small lump of ore which had turned up in this general period. This turns out to be iron pyrites. It helps to account for the smelting furnace, and the smelting furnace accounts for it, as we would wonder why a lump of iron ore should have been brought to a place if the inhabitants did not engage in smelting iron.

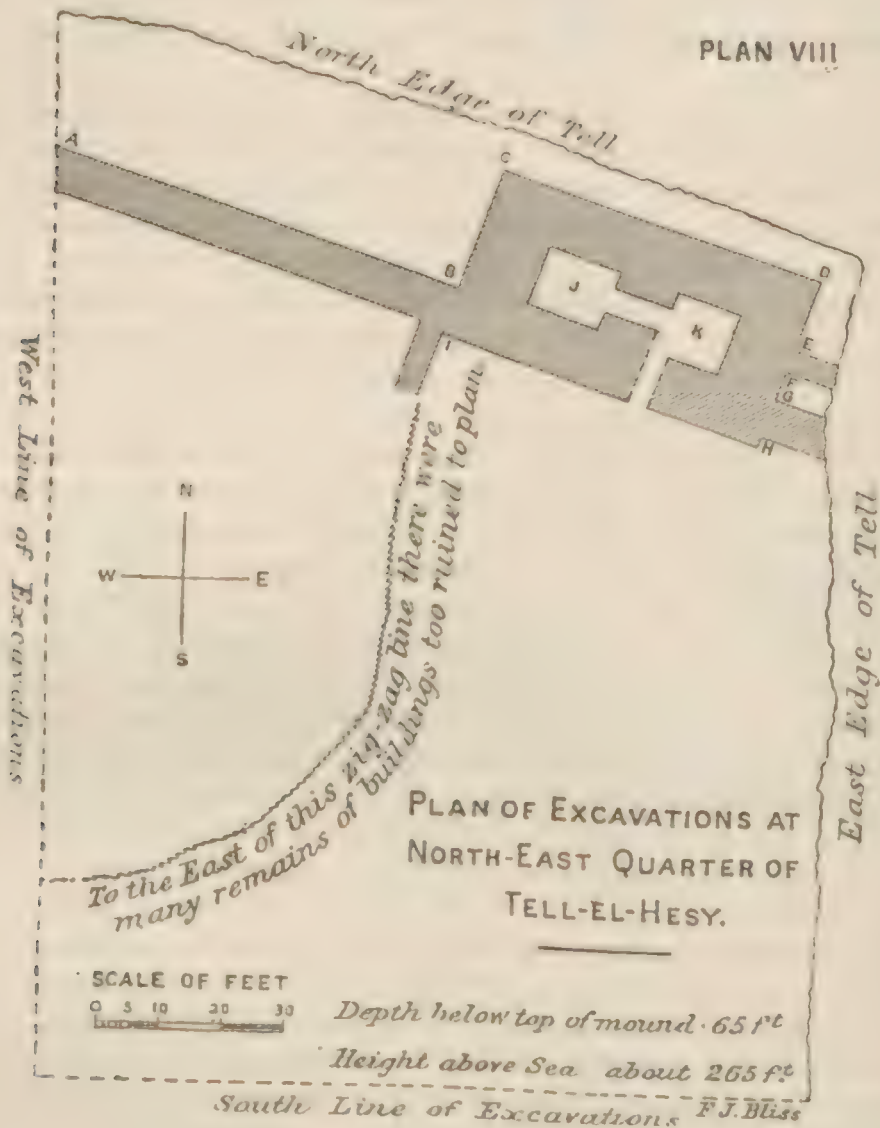
Now comes in an apparent difficulty. Whereas I had found iron

implements in plenty down to the level to be assigned no earlier than to the tenth century B.C., not far from the earliest known date for iron tools in Egypt, from that level downwards to the level under consideration, which is no later than the fifteenth century, no iron tools turned up, these having given place to bronze. In his "Inorganic Chemistry," Professor Remsen, of Baltimore, says, "The suggestion has been made that as it is less difficult to extract iron from its ores than to make bronze, possibly iron was used as early as bronze, if not earlier; but that owing to the fact that iron easily rusts, implements of this metal have disappeared, while those made of bronze remain."

Now, many of the iron weapons and tools I found were so far destroyed by rust that they went to pieces in my hand, though I regret to say that I did not notice whether the objects found down through the various levels were more and more oxidized until they disappeared. However, account for the non-appearance of the iron implements as we may, the fact remains that we have at a level no later than 1400 B.C. a furnace containing iron-slag. The structure presents the usual features of a simple blast-furnace, with one important addition. We have the chamber probably 15 feet high, which may have had a conical shape above the point to which the walls were ruined. We have the slag which had hardened upon the side of the furnace, broken off and taking with it bits of the mud-brick wall, baked hard. We have an opening to the outside, and a pit for collecting the metal. We would naturally suppose that the blast of air was forced through this opening, had we not to account for the strange passages leading from the lower part of the chamber up through the walls. These were of course intended either to conduct upwards what was in the furnace, or to bring something down into the furnace. The first case would be covered by supposing that the flames and hot air were meant to fly up the passages to keep the walls heated and to react on the chamber, but a fire hot enough to influence the walls by the hot air passing through these holes would be hot enough to heat the chamber without any such heating of the walls. The other case would be covered by supposing that these passages opened at the top of the building into some covered place, a chimney being left in its centre for the escape of gases from the chamber below, with a single opening through which a blast of cold air could be forced from outside down through the passages, become heated as it descended, and enter the chamber at the level where tuyeres are usually found as a stream of hot air. I am indebted to Professor West for this suggestion. At first the greenish deposit on the walls of these holes might seem to be an objection; but it is quite reasonable to suppose that the man working the bellows above might stop sometimes to rest, when the flames and gases would rush up, resulting in this baking and coating of the lining. This constant inrush of cold air from above, inside the walls, might help to explain why their interior was not baked hard, except at their face inside the chamber. If this theory be correct (and I hope it will be discussed by those who are authorities in the matter, for these suggestions are, of course, offered only tentatively), we

find 1400 years before Christ the use of the hot air-blast instead of cold air, which is called a modern improvement in iron manufacture due to Neilson, and patented in 1828 !

When I next visit the Tell I shall bring away specimens of ashes from the great bed, and analysis will tell us whether it was the result of alkali-burning or of smelting.

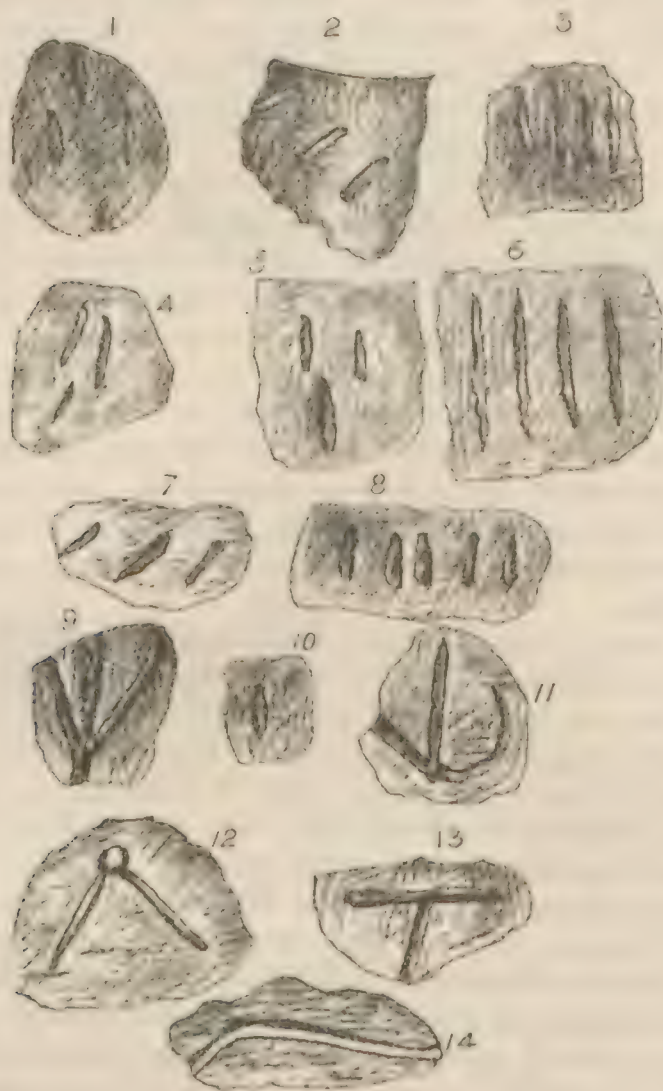


We now come to the two earliest Amorite towns defended by the great walls which Prof. Petrie describes. Like him, I recognized three re-buildings above the original wall, but otherwise our long slow work of laying bare the wall inside and out, brought to light some facts which necessarily could not have been gathered by his rapid reconnaissance before the Tell was removed. On Plan VIII may be seen my sketch of the place. When Petrie was working, 60 feet of Tell were imposed on the town figured on this plan, but the wall from D to H being near the edge of the Tell was

easily uncovered and correctly measured by him at 28 feet. At D he made a trench 50 feet to the west. Had he gone 6 feet further he would have found the great corner C. The face of the wall, D-H, as he found it, was much worn away and might easily have been taken for the breadth of a wall broken off at this point, but at D we went down 4 feet deeper than the marks of his digging and found a perfect corner resting on the original sand, and a perfect face going south along the line D-H, also deeper than his digging. The base of this wall rose as it went south. This face had been preserved by a strengthening wall on the outside, consisting of rough stones in a parallel line about 3 feet away, with the intervening space filled in with pebbles. This ran under the walls E F and G H, which were much ruined down, and which Petrie may have taken for part of D-H. It was these walls (which may have been one having a small room at this point) that carried the fortress on to the east, whereas Petrie, who took D-H for broken breadth and not length, supposed a great wall, 28 feet in thickness, was continued originally to the east. It was very interesting unearthing this great tower, I C D H. First we came upon the room K, which had been very much burned in three or more periods, clearing it out to a depth of 14 feet. Being on the look out for the wall 28 feet thick, I was at first puzzled to know where it was to come in, as this room was so near the edge, when one day it flashed upon me that this chamber might be *in the middle* of that wall, which it turned out to be. So instead of a wall 28 feet thick we have a great corner fortification or tower, 56 feet by 28 feet, with rooms not much more than 10 feet square, enclosed by walls 9 or 10 feet thick.

Between D and C the ground rises 8 feet, but at C the builders had dug down 8 feet into the original soil, thus laying the foundations at C at a level with those at D. In the hope of finding a foundation deposit we dug down and undermined this corner. Here we were puzzled to find some black rubbish to the depth of a foot, but it can be accounted for by supposing that the original trench had been left open before the wall had been built, and the rubbish had either fallen in or had been thrown in. We searched the corner in vain, as also the corner C. The Amorites were determined to leave no traces. Outside of C D were a few rough rooms of the same period. Outside of A B was a thick wall, from the pottery evidently belonging to a later period, built on the ground which had been left untouched in this earlier period. It was probably this wall that Petrie found in his cutting when he searched for a western continuation of D C. The lowest 2 feet of A B near the corner B was built somewhat slanting, so that each course of brick was thicker than the one above it as in a pyramid face. To the east of the zigzag line on Plan VIII were ruins of two towns one above the other contemporaneous with the great tower, but they were so incomplete that I decided that nothing could be gained by measuring and planning them. To the west of the zigzag line the space had evidently been unoccupied during the first two centuries of the Tell, neither did it seem to have been used as a rubbish heap, for the Amorite ware was absent. The original hill was full of irregularities of

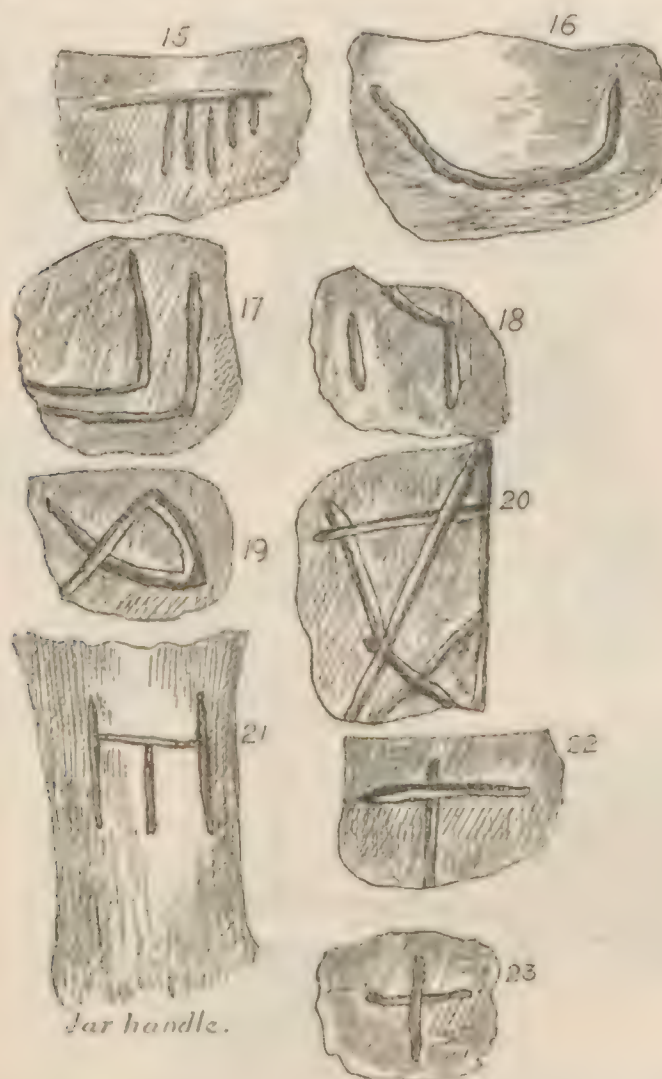
surface, sloping this way and that, and it was difficult to forecast the time it would take to complete the investigation. The large burned room containing the bronze weapons, which we had reached at this same level the year before in another part of the Tell, had led me to hope for valuable finds in my large excavation, so the utter barrenness of these towns was a great disappointment. As the season advanced and nothing was found, the storms being upon us, I decided on a principle of investigation which should be thorough and yet save unnecessary labour in clearing out hope



less places. We examined all the rooms of the lowest town to the level of their original flooring, with the exception of two or three which bore undoubted marks of having been pillaged in early times, as they contained a mixture of broken-up strata of burning brick and rubbish, differing from the rubbish in which the tablet was found, which was brick, burning and rubbish lying fallen just as it had been ruined, and not broken up by artificial process.

On Monday, December 12th, the field of excavations presented a most irregular appearance, great walls standing out, pits here—elevations

there—piles of earth in every direction; but on Friday noon, December 16th, when the Bedawy Hussein, who owned the land and was anxious to begin his ploughing, came to inspect the place, he found a large sloping field so neatly levelled that he could not say a word in complaint, but thanked me for a present of a napoleon. In fact we had greatly enlarged his field, for whereas to the north the earth thrown down had encroached on his field below, so that the gain above was but slight, yet we had made ground for him at the east where we had stolen from the

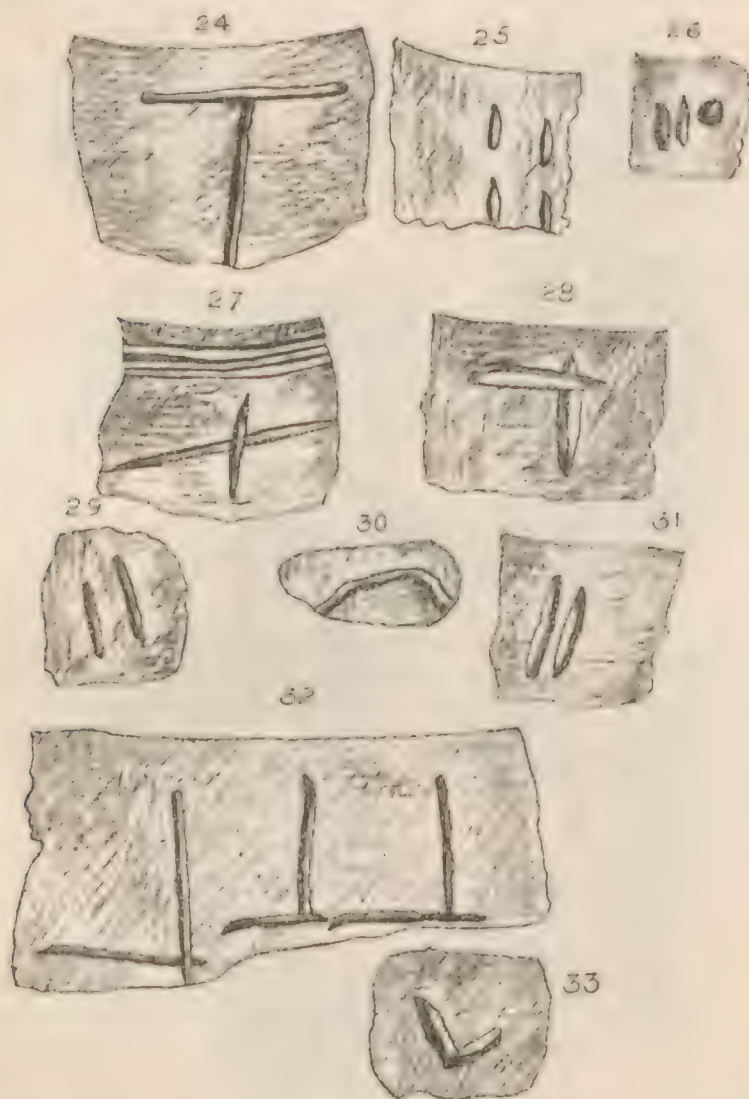


river-bed below a section over 150 feet long and 20 feet broad. Another gain of 20 feet arose, of course, from the broadening of the hill as we descended.

One of the reasons for the great expense of the work at Tell el Hesi has been the necessity of leaving the ground fit for ploughing. At first the height above the river and the field was so great that our earth did not trouble us, but as the slope of earth we had thrown down thickened in breadth, and lost in height, the difficulty greatly increased, until during the last season we had to re-handle the top layers of our slope

several times. But I feel sure that this was a cheaper way than buying up the land. For we arranged matters quietly and directly with the Bedawy, buying out his crops, whereas the purchase of the land would have involved the machinery of title-deeds, fees to appraisers, fees to officials, delay, no end of anxiety, and finally an exorbitant price.

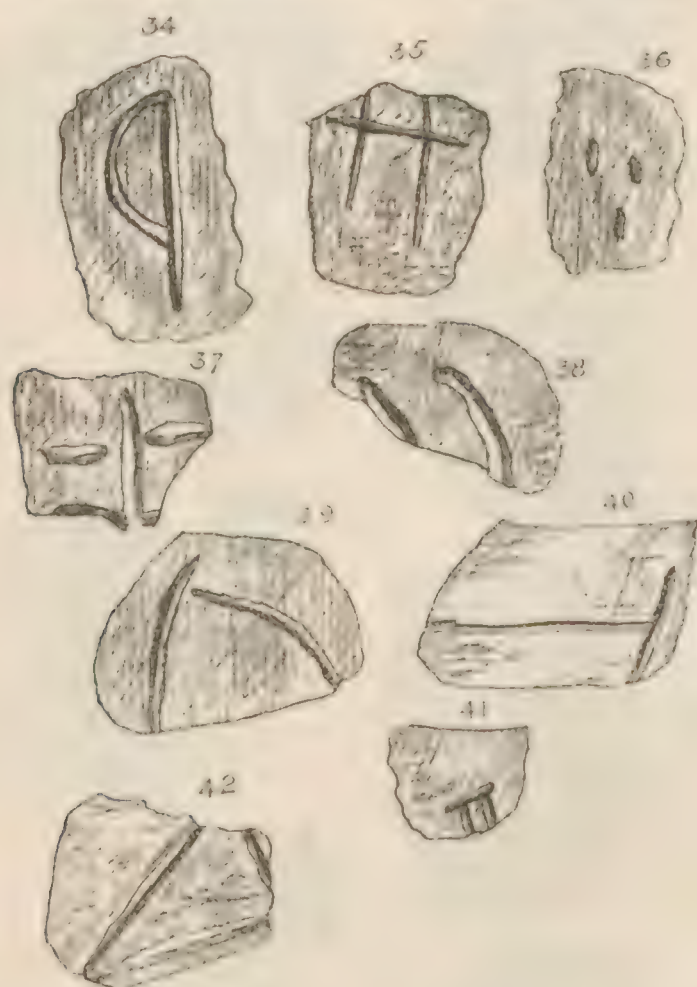
Another singular reappearance was seen in the bone objects shaped like pointed paper cutters, probably for use in separating the strands in weaving, which occurred eight centuries later. The incised pottery



fragments, Nos. 1-52, belong to these earliest Amorite periods, 1600-1700 B.C.; 21 may be somewhat later, 48 is the earliest known as it was found under the corner C. The majority are mere conventional marks, but I hope that 11, 13, 15, 17, 18, 19, 21, 22, 24, 28, 32, 34, 35, 41, 44, 49, and 51 may be carefully examined with reference to the possibility of their containing suggestions for the beginnings of Phœnician writing. The cuts 54-58 all belong to this period, 54 may be a mace, but is only $1\frac{1}{2}$ inches high; 55 and 57 are tiny jars; 56 is of bronze, much decayed, but plainly a charm, as it was to hang by a ring in the head of the figure.

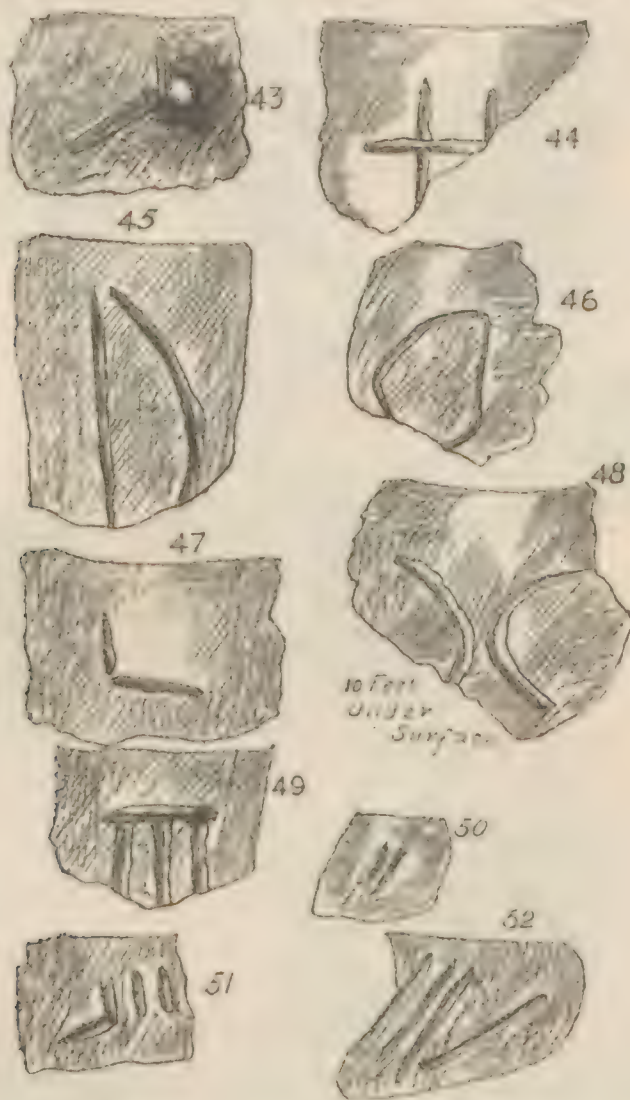
The present appearance of the head is that of a monkey, but it is too decayed to make recognition complete. I send a photograph of Amorite pottery which shows the position of the ledge-handles and spout. 58 is an interesting flint weapon. We found numberless flints, and my former observation was confirmed that the long, thin, well-polished flints belong to the earliest periods.

A few words as to our camp fortunes may come in here. We were actually on the ground September 24th. The time was opportune, for the middle of September was terribly hot, but after the end of the month we did not suffer from the heat, and had we begun later our twelve weeks



of work would have extended into the winter, when camping out in stormy Syria is an anxious experience. It will be remembered that the autumn of 1891 was most unhealthy in Southern Palestine, and it was with a good deal of apprehension that we returned this last season. As a precaution we encamped on rising ground two miles to the north-east of the Tell, which is the centre of the malaria, as the water lies there stagnant. As it was, we were for the first month nearer the Tell than any of the Arabs. Fortunately the season was a very healthy one both among the Arabs and Fellahin, and our own little camp kept in capital condition. The first month passed pleasantly and quietly. I was quite

alone with my servants and workmen as the Effendi had not yet come, but the ride to and from the Tell twice daily made a change in the routine of life. After the first rains an Arab tribe of some thirty tents moved into the depression just back of our camp. At first I was somewhat dismayed at the complications suggested by this close proximity, but after a day or two of trial, I was delighted to find that our new neighbours were a social addition. For almost two months we lived side by side in great friendliness. I knew that I should get on with the Sheikh, but I feared a quarrel among "the herdsmen of Abraham and the herdsmen of Lot," which, however, never took place. Sheikh Selman



is a man under five-and-twenty, with the long Arab face, and of a gentle, almost melancholy address. He has the instincts of a gentleman, and was always sensitive lest he be trespassing on my time. One had to be rather careful with him, as his feelings were delicate and his pride immense. His duties as Sheikh seemed to be to preside in the "guest-house," which was a part of his large tent, and to act as judge in disputes, for a fee. Many a restful half-hour I spent in the circle about the evening fire

in the guest-room. About 20 men and lads sat or reclined about the fire, which was fed with twigs and thorns by the old man of the camp. Now it died away leaving the tent dim, now it would leap up throwing a rich, red light on the strong, swarthy faces. From outside came the bleating of sheep and the low roar of the hand-mill where the women were preparing supper. At times the conversation was lively, but these Arabs



are not afraid of silence, and it was agreeable to sit quiet if one did not feel like talking.

I was present at one of the judicial processes, and it was interesting to notice the dignity investing the simple affair. No one changed his position as the guest-room was changed to a court. The litigants handed their weapons over to Selman as a pledge for his fee, and then each party had his say, sitting and smoking quite informally. The defendant was

accused of having torn his wife's head-dress off in a rage, and the accuser was her relative, to whom she had fled after this disgrace. Selman found for the lady, and I went bail for the defendant to the extent of half-a-crown, which he was to pay to his wife next day when the reconciliation was to take place. The custom obtains, when fees or damages are to be paid, to name a large sum, say 100 piastres. This is agreed upon; but at the next camp-fire one man will turn to the judge or to the party claiming damages, and say, "For my sake remit 10 piastres," and the next, "For my sake remit 15 piastres," and so on, till the sum is reduced to reasonable limits.

The heavy rains came very early, so that the ploughing began by November 7th. The year before it did not begin till a month later, and we finished our work without having to raise wages; but this year we had to advance about 30 per cent. However, we got about 20 per cent. more work out of each man, because the women do not plough; and such quantities flocked in to take advantage of the rise in wages, that the men had to dig up earth much faster to keep up with the increased basketers.

My brother made me a visit, and one night I invited some picked workmen to dinner, that we might have a Philistine dance. The amusing thing was that when our Arab neighbours heard the sound of mirth, they rushed up and organised a rival dance far wilder and more effective than the performance of the Fellahin, who dropped off one by one, and finally confessed their inferiority by appearing as spectators of their rivals.

I must mention one incident, to show that we certainly are not afraid of the Arabs.

Harb, the big Sheikh, has been hinting for two years that he wants a present, "a cloak, a silk scarf, and a pair of boots" being his modest demand. I have always put him off, for the buksheesh leak hole is one that must be sharply looked after. One day in November two lads connected with his family were loafing about the Tell, staring at the girls, causing the workpeople annoyance, and during the noon recess they wantonly shot a dog belonging to a stout digger. Down rushed a hundred angry people from the Tell, and down rushed Yusif after them, and it was entirely owing to his authority that a serious row was averted. On hearing of it, Ibrahim Effendi and I sent for Harb, and represented to him that as he was our friend we would not take the matter to Gaza, but that he must make the man pay a fine to the owner of the dog, and after a day or two we actually did extract a dollar from him, though I never saw anything come so hard as his purse from his pocket, except the money from his purse, and then he had carefully avoided taking out the agreed-upon dollar, but produced a half-napoleon and asked for change, which I cheerfully and promptly furnished, much to his chagrined surprise. The subject of the cloak, the silk scarf, and the pair of boots never came up again, but the story of how the Khowaja got a dollar out of Sheikh Harb took its place in the local folk-lore.

We have been very fortunate during the past two years in finding the Arabs so quiet. The safety of the country owes much to the honest administration of Ibrahim Pasha, the Governor of Jerusalem. In all that concerns our work his Excellency has been kind and helpful. I hope that in the interests of honest government he may remain long in Jerusalem. His worst enemy cannot accuse him of taking a bribe, and he does his best to secure honesty among his officials.

LETTERS FROM HERR BAURATH SCHICK.

I.—REFLECTIONS ON THE SITE OF CALVARY.

I.

IN writing a paper on my views as to the true site of Calvary, I wish to say first that this subject has been exhaustively treated by more competent persons than myself, and that all I can do is to express my own humble and poor opinions respecting it; and, secondly, that I have never considered this matter of such great importance, as if our salvation depended on it, but am rather convinced that the Lord has so ruled that there should always be some uncertainty respecting it. As it has been in the past, so it will most likely be in the future.

Yet notwithstanding this, it is still for the Christian and the scholar an object of interest to inquire where the most important event for mankind took place, and I have therefore studied the question with some diligence, and am sorry that the result of so many years' thought and study are not more satisfactory. I will now give a review of the whole, as it has passed through my thoughts, and mind, and life.

2.

When in the autumn of 1846 I and my companion, Mr. Palmer, arrived at Jerusalem, we found there the English missionaries, and besides the Prussian Consul, Dr. Schulz, only one German family and one single young man, a carpenter from Bavaria, who had been already several years resident in Jerusalem, and knew the Arabic language. He was a great help to us, showing us, amongst other things, the Church of the Holy Sepulchre and "Calvary." I had expected to see Jerusalem standing on a mountain, and was surprised to find that, after crossing the highest ridge, the road *descended* to the gate, and that inside the city the streets still descended to the house of our host, the said carpenter, which was situated in the Wady. I was led to "Calvary," which, instead of being outside, seemed to me to be nearly in the middle of the town, and not on a hill, but on the side of a long ridge. My thoughts were: This cannot be the real

site, as Golgotha was outside the city,¹ and the old city must have extended at least as far as the present one, if not farther, because the people on the wall could hear and understand the words of Rabshakeh, who was (2 Kings xviii, 17; Isaiah xxxvi, 2) standing at the "upper pool," which I took to be the present Mamilla pool. I had also brought with me a little German book ("Biblische Geographie für Schulen und Familien") in which it was said that the Church of the Sepulchre is situated in the wrong place, as Golgotha was outside, and very likely was the rocky knoll north of the present town, called now the Hill of Jeremiah's grotto.² I went and examined this spot, but came to the conclusion that the hill is not like a skull, unless one uses a good deal of imagination. It is also too high, and the priests and other nobles who mocked Jesus would not have taken the trouble to go up such a hill and by doing so show some honour to Jesus; but they spoke to the people standing round the cross, from the road passing near it, and so I came to the conclusion that the smaller hill, west of the Damascus road, would better answer to the requirements; and for myself, I from that time, for two dozen years, called this little hill "Golgotha," and on it there are Jewish rock-hewn tombs.

Before the year 1860 I made a small model of the configuration of the ground on which the Holy City stands, with its environs, marking thereon the lines of the *old* and the *present* walls, and put to the figure of the said little hill, "By some supposed to be Golgotha." Several years later, when an elderly gentleman was for several months a guest in the British Consulate (if I remember rightly it was the father of the English Consul, Mr. Moore), he came one day to me and said he had heard that I had a model of the City of Jerusalem, and would like to see it. So I showed it to him, and, after examining it for a few minutes, he said, "How remarkable! I thought I had found out, by my walks around the city, the *real* site of Golgotha, and now I see that others had the same idea before me"—thus confirming my own views at that time.

I would remark that from the beginning of my sojourn at Jerusalem, I read as many books (written in German, and later on in English) relating to the topography of Jerusalem as I could get access to, and found that they are of *two* classes; the one holding the genuineness of the site of the Church of the Holy Sepulchre, the other denying it, either simply, without pointing out *another* site, or in some cases, in order to be more complete, doing also the latter.

When I read a book of the first class, and considered all the arguments which were brought forward in favour of the genuineness of the site, I received the impression that the author was right in his assertions—but on reading a book pointing out the contrary, and bringing forward

¹ This, my first impression, lasted for 37 years.

² The author of the little German book, the Rev. Hochstetter, cited some traveller who expressed this notion first, but as the little book is no more in my hands, and in the new editions the remark on Golgotha *was left out*, I cannot say who he was.

arguments against the genuineness of the site, I received again the impression that *this* author was right in his assertions. So the more books I read the less I really knew where Golgotha in reality was : all was uncertain. But at the same time I acquired a great deal of *knowledge* bearing on the question, and finally arrived at the conviction that the Church of the Holy Sepulchre is situated in the *wrong place*. Many travellers, after having spoken with me on the topography of Jerusalem, regularly asked : "What is your idea of the Church of the Holy Sepulchre ?" or, "Now, you can tell us : is the traditional Calvary the real one or no ?" When expressing my *negative* conviction, and the enquirer had a different opinion on the subject, he would usually say : "Why ? Please give me the proofs ;" and so I had to speak *much* and in *vain*, as no one, having already settled the question in his own mind, would lightly alter his opinion. To avoid this, at a later period, when asked the same questions, I answered, "Oh, that is a difficult question ; much can be said for and against it, so I am not able to give a positive answer ; but if you wish to know my *individual* and *private* opinion, it is that the church does *not* stand on the right place ;" and with this answer most were satisfied, but some said, "I am sorry that you have not a different opinion." I found that Roman Catholics, with few exceptions, believe the tradition, and have no inner spiritual freedom to doubt respecting it, fearing to fall into sin. So the controversy is going on chiefly amongst Protestants, first in Germany and America, and now in England : which controversy will hardly settle the matter.

3.

For 37 years, from 1846 to 1883, I had then, as above stated, the private conviction that the Church of the Holy Sepulchre is standing on the wrong place, although I could not prove this, nor point out with certainty and without doubt the real site. Then it happened that the Russians got possession of a piece of ground east of the said church, on which lay much *débris*, which had, by order from St. Petersburg, to be cleared away. The Russian Archimandrite here, the Rev. V. Antonin, had the work under his charge, and he wished me to look to the matter, and in some measure to direct the work and report on the result, which I did.

The work went on for several months, but few things of interest were found and not what we expected. We found no cisterns nor remains of old walls, except those which were known before, but we found a *fine pavement*, and that the rock rises higher than the streets outside.

And now comes something, which I would rather give in parenthesis, as not belonging properly to the matter. When the work was going on, Dr. Zagarelli, Professor of the Georgian language at St. Petersburg, came here for some weeks. He paid me several visits, and we spoke about this exploration work, when he made the remark that it was a pity there was no competent person here who might give a proper report

on the state of things. I requested him repeatedly to appoint me an hour, when he would be there, in order to give me the necessary hints on those old remains. He promised so to do, but nothing came of it. When the work was ended, and I was about to write the report, I found it not an easy matter; for *merely* to say that this and this was found, would have been to show that I did not understand things of antiquity. So I worked and studied very earnestly—first the lines of the walls of ancient Jerusalem, secondly the siege by Titus, thirdly the kind of churches built in the time of Constantine, and fourthly, *how all this may agree and be reconciled with the present buildings and the old remains which were found*. Thus I had not only to do with the Russian ground—but with the whole neighbourhood round about, examining all the cisterns, whether they were hewn in rock or built, the drains, the cellars of the houses, &c., and making a plan of the whole. In the course of this work I found the continuation of the old Jewish wall, consisting of large stones, in a long line northward, and that Byzantine work was first built upon it, then Crusading, and finally Mohammedan. In a vault I could point out clearly masonry of five different periods. So that it became evident to me that Constantine on this eastern side of the present church built his Basilica on the remains of the old Jewish walls—which had here once formed a fortress—perhaps the residence of Nehemiah (chapter iii. 7), the throne or seat of the governor on this side of the river, and perhaps the tower mentioned by Josephus (“Wars,” V, vii, 4)—as the middle one of the northern (the second) wall, which was defended during the siege by a cunning man named Castor. When this part of the wall was taken by the Romans, they came soon to the market or bazaars of the goldsmiths and apothecaries, or spice sellers, which are still here—and they, in Nehemiah’s time, repaired the walls here. I found further, that on the west of this fortress there runs along a ditch, in which several cisterns are now built, and a part of which is still the “Chapel of Helena.”¹ Beyond this ditch stands the Church of the Holy Sepulchre, and hence Constantine’s building was of great length. In the west the circular church “Anastasis” over the sepulchre; then a large court surrounded on three sides by cloisters, and on the fourth or east side, by the western face of the magnificent Basilica or “Matyrian,” crossing over the ditch; and hence Eusebius speaks of pillars going into the ground, and of others above ground. I found, further, that the walls of this building and the rows of pillars stood where the walls of the present buildings now are. All this was to my own disappointment and astonishment, for I now became overwhelmingly persuaded and convinced that really Constantine built his church here, and that the second wall ran here, so that the places of Calvary and the Holy Tomb were *without* the wall—although very *near* to it: and this is just what the Gospel says—John xix, 20. Many other things brought me to the same

¹ Thinking this to be my *own* idea, I found afterwards to my astonishment that even several old Christian pilgrims have mentioned this in their writings.

result, viz., that *very likely* this is the real place where Our Lord suffered, although I cannot fully prove it, and so, at present, I stand almost alone amongst the Protestants in Jerusalem in holding this view; as the majority believe the so-called "Skull Hill" to be the true Calvary. When, a few years ago, many visitors came to see my model of the Temple, a late English Bishop also came and was pleased with what he saw and heard; but when, coming to the question of *Calvary*, I confessed my belief that the Church of the Sepulchre is genuine, his Lordship became so displeased that he left unfriendly, as if he would have no more communication with a man believing such things! But a few days later, this was balanced by another Bishop, from Canada, who came and saw the models; and, as usual, at the end asked my opinion on the site of Calvary; and when I answered that the church stands in the right place, and explained how I came to this conviction, his Lordship blessed me and said: "It is quite a relief to my mind, what you have told me now, and that you believe the Church of the Holy Sepulchre to be genuine!" Other people have spoken in the same manner, and so I find all are divided into two classes, from religious motives. Of those without religious motives who have spoken with me on the matter, who at once say: "You must know—I don't believe *anything*" (which forms a *third* class), I will say nothing, as their testimony is of no value; and such I answered according to the rule of Solomon, Prov. xxvi, 5.

And now again comes a parenthesis not belonging directly to the question, but still, perhaps, interesting to the reader:—

My report on the result of the excavations made to the east of the church caused great sensation in St. Petersburg. I had said in it that the granite pillars near the eastern street belonged once to the "Propylæum" of Constantine's Church, and similar things; and so Herr von Manzoorof, who had bought the place eighteen years before, and who was President of the Oriental Orthodox Mission,¹ was censured in high quarters for having let such an important place lie waste. His reply was that "Herr Schick is wrong in his assertions," and then he came here and stayed for five months, gathering materials for writing a book, in which he intended to overrule all my assertions and statements, and to show that I was wrong in everything. Many hours he talked with me on the subject, but all that he said convinced me more and more that I was in the right, and so it was decided in St. Petersburg to build up the waste place; which has since been done in a rather expensive way. The old remains are spared and covered in, so that every traveller may see them. The place is at the same time a kind of sanctuary to which Russian pilgrims flock. From the Emperor I myself received a high Order.

¹ Which was re-organised in 1882, when the Grand Duke Sergius, brother of the Emperor, was made its President (instead of V. Manzoorof) and Staatsrath v. Hitrowo its Secretary.

4.

About the time when I gave up the idea I had so long had, that the traditional Calvary is the wrong one, and became converted, as above stated, to the conviction that it is genuine, Dr. Selah Merrill, the American Consul, maintained that the so-called "Skull Hill" (i.e., the hillock over Jeremiah's grotto, north of the present town) is the real Calvary, and pointed it out to travellers as such. Also he wrote a pamphlet to prove this, and his arguments, partly such as were used before, partly some new ones, convinced some people, but not all, as the arguments were not striking enough. But now came the late General Gordon with the idea that this rock was intended to be the site for the Temple, but the builders refused it, and built the Temple further down on the ridge, and that Christ was crucified here instead, and that it became thereby the "corner stone"! He called it the "Skull," taking this notion (as he showed me on the map) from the Ordnance Survey Map, scale 2,500, where the contour 2,549 shows in reality the form of a skull; and as at the western foot of the hill a rock-cut tomb existed and had been cleared, he decided that this was the Tomb of Christ. Many travellers, especially English, on such authority, gave the matter attention, and went there and believed, and also Americans, as their Consul showed the place to them, and so the matter became widely known, and the question filled very many minds in such a way that the hill and the tomb were made a kind of "fetish." It seems the enthusiasm has already passed the culminating point, and that the matter will be treated more soberly.

And now with respect to the question: *Where is the real Calvary?* It is not necessary for me, nor is this the place, to cite everything that has been brought forward by English, German, French, and other writers, for or against the traditional site or in favour of other sites. Anyone who wishes to have a vote on this question ought to read and study all that has been written respecting it. For me, it is here enough to give an outline of my views and state the principles on which I deal with the matter.

According to the New Testament, the place of the crucifixion of Our Lord—and hence also His tomb—was outside of the city as it then existed, but there is no hint given on which side it was. So we may look for it on all four sides. The chief necropolis of ancient Jerusalem was on the south, where there are many rock-cut tombs, and some¹ have thought that Nicodemus might have had his there, and as "Tophet" was there, in which unclean things were put, so the place of execution might have been there; and so some have put the place of the crucifixion on the southern brow of the traditional Mount Zion—outside the "dung gate." But as there are also on the other sides of the city rock-cut tombs, and as it seems to me there was no special place for execution either

¹ The late Dr. Krapff for instance.

among the Jews or in the East generally, or with the Romans,¹ I think Calvary was not on the south side of the town.

The east side is more likely, but still stands in the same line with the south. On the east side is the Kidron, in which Asa the King (1 Kings xv, 13) burnt the idols; also Athaliah (2 Chron. xxiii, 15-21) was executed there. So the late Mr. Fergusson put Calvary near the Golden Gate, and the tomb under the Dome of the Rock. Dr. Barclay put Calvary more towards the north-east, on the brow of the hill outside St. Stephen's (or Sitey Mirjam) Gate. An English officer lately wrote to me that he thinks it was near the Garden of Gethsemane. But all this seems to me not likely, as, in the time of Our Lord, the ground from the city walls eastwards, as far as Bethany, was in some degree *sanctified*, so that pilgrims residing there in huts, tents, or caves during the days of the festivals were considered *as residing in the Holy City itself*.² So executions could hardly have taken place on this side.

The west, or rather north-west, side is the most probable spot where one might hope to find Calvary. In old books, and especially in all old *pictures* of the city, Calvary is always shown on the west or north-west side, and travellers coming to Jerusalem or residents there, when asked, "Where would you look for Calvary if the traditional site should be wrong?" generally answer without hesitation, "Somewhere in the north-west."

Here also Dr. Zimpel put it on the testimony of the religious sister Emmerich³ (a somnambulist). Even Robinson, the hero in the camp of the opponents of the traditional Calvary, says: "The place was on one of the (two) chief roads, which from the gates of Jerusalem went down (the one) to Jaffa and (the other) to Damascus;" hence to the north-west of the city (just as the traditional one is situated, only further out), so that in ancient times the site may have been pronounced to be on the north side. Thus it follows from all that I have said that if the traditional site is wrong, Calvary must be looked for on the north side of the present city. Since the Russian establishment many other buildings have been erected outside the town on the north-west. New-comers no more look for Calvary there, but more to the east, north of the town, where there is still much free ground, and as they have the idea it must be some height, they naturally come to the "Skull Hill," or the smaller hill west of it, where I myself first put Calvary, and then Captain Conder,⁴ Dr. Chaplin, and others.⁵

¹ Josephus makes mention of Jews, crucified by the Romans in various localities.

² See Caspari, "Leben Jesu Christi," Hamburg, 1869: Agentur des rauhen Hauses, p. 162.

³ D. Zimpel, "Die Weltstadt Jerusalem," Stuttgart, 1852: Schneitzes-borthsche Verlagshandlung.

⁴ The place is described in the Jer. Volume, p. 381, and *Quarterly Statement*, 1883, p. 78.

⁵ "The Times," September 30, 1892.

5.

Among the many objections made to the traditional Calvary there are only two of great weight, viz. :—

- (1) That it is now inside the town, whereas it was, according to the Gospel, outside ; therefore the site of the present church could not have been Calvary.

My answer : This objection vanished from me, as by observing old remains and the configuration of the rock levels under the present city, I became convinced that the site was formerly outside, as above stated. (See my special paper on this subject.)

- (2) That the knowledge of Calvary was lost, and the site had to be looked for, and the finding of it was described as a miracle wrought by God.

To these objections many answers were given and at great length. Perhaps the most effectual was by Chateaubriand,¹ to which even Robinson showed great attention, but he proceeds to contradict it point by point in such a way as to give the impression that he *wished* to controvert it.

My own humble opinion and conviction is this : Our Lord had told his disciples that when they should see Jerusalem besieged they should leave the place ; and so they did, residing in Pella, beyond the Jordan, till the war was over, and they were able to return to Jerusalem, which they certainly, or at least the greater part, did. For Jerusalem was not so thoroughly destroyed by the Romans as is generally believed. In the upper (or western) town not much was destroyed, but the eastern, or lower town, with the Temple, thoroughly.

When Titus had taken the latter and besieged the upper town, this was still standing, and not much destroyed, and when it was taken on the western site, and the towers came into possession of the Romans, Josephus tells us, that the "fire raged, and the town became destroyed ;" but he also says that Titus left a garrison there, in the towers and the western city, so it could not have been entirely destroyed. And for what reason would the Romans have destroyed what still remained, after they had got possession of it, and were resolved to stay there, and keep the country in check from there ? Also nothing is said of the rebuilding of the town, and yet only 60 years later, Hadrian ordered that walls and many other things should be built, so there must have been some population there, and, as it seems to me, continuously. The Christians were first in favour with the Romans, as not having taken part in the revolt, and so there was no hindrance to their staying there, and having in their possession their former houses and churches, or places held in veneration by them.

¹ Robinson, Bib. Res. I. 411, Boston, 1856.

But when the persecution of the Christians began, and their churches and whatever else they had of the kind were destroyed or otherwise disposed of, so we hear it was also done with the place of the Martyrdom and the Resurrection, so that it is clear people did then know it. In the course of 200 years, the appearance and configuration of a piece of ground or the site of a building may become quite altered, and yet the general site be known, though not the exact spot. And if search happens to be made just on the right point, one may certainly call it the leading of God, and it is quite natural to be astonished when at once the looked-for object comes to light. Anyone who makes excavations will often make this experience. We know, for example, whereabouts the "Tombs of the Kings" must be looked for, and if, one day, excavations for them are begun at a point carefully selected, and the shaft really meets the entrance to the tomb, everyone connected with the work will marvel, and ascribe it to the leading of God, if he is a Christian, and if not, he will say it was an accident. Would this be a proof that the people did not know where to look for the place?

These Christians knew, as well as we know, that Jesus was crucified outside the town, and if they had not known where to look for the place, they would certainly have looked for it more outside, just as now the opponents of the tradition do—not under the *débris* within the walls of the city!

Then one must think, further, that the Christians of those ages were less learned than the people of our day, but that they saw in everything the *ruling of God*; otherwise they would not have had the power to undergo so many sufferings and martyrdoms, which I fear our wise generation will scarcely do. So when they attributed everything to the ruling of God, this cannot be an argument against the truth of their sayings. Writing and reading were in those ages very little understood. About 200 years later Procopius, describing the buildings of Justinian in Jerusalem, writes in the same manner, and says when pillars were wanted, and the Emperor was grieved about it, "*God pointed out in the nearest mountain a bed of stone of a kind suitable for this purpose.*"¹ He ascribes here to God what a builder could have found out by himself.

Such a grand building as Constantine erected would not be made without historical and good grounds. Finally, I may say that *we* were also astonished when we found the fine pavement, and that the rock, where once the Martyrian Basilica of Constantine stood, *came out much higher* than the level of the streets round about. So the astonishment when the *tomb* was found was quite natural.

Robinson makes a further objection against Chateaubriand, and so against the traditional site, that from the death of Christ to the Emperor Claudius the city outside the second wall could not in only ten years have been rebuilt so far as to want a new protecting wall.

¹ Palestine Pilgrims' Text Society's "Buildings of Justinian," London, 1886. p. 142.

To hear this from an American is rather strange, as in America cities are often built in ten years, and it may be remarked that before the death of Christ many houses were certainly built outside the wall, scattered here and there, as is now being done again, and still with unoccupied spaces between, fit for places of execution. Moreover, when Agrippa built the third wall not all the ground he enclosed was covered with houses, for the Romans, when they had taken the wall, could pitch their camp inside it without pulling down the houses. And so it is with all the other objections.

As *curiosities* I will add the following :—

- (a) Falmereyer, in order to explain the difficulty, the Church of the Sepulchre being now *inside* the town, and yet Christ was crucified outside, interpreted that it means outside the “city” —the old¹ or chief one—just as in London the inner part is called City, so he thinks it was at Jerusalem.
- (b) One should think, if the place of the crucifixion is wrong, the tomb must be also wrong; not so Schweiger, who pronounces Calvary to be a forgery but the tomb to be genuine, and Jacob Ammon says the tomb is a forgery but Calvary is genuine.”
- (c) What I have to say on the tomb, by some considered to be the tomb of Our Lord at the foot of the Skull Hill, I have already said in the *Quarterly Statement*, 1892, p. 120.

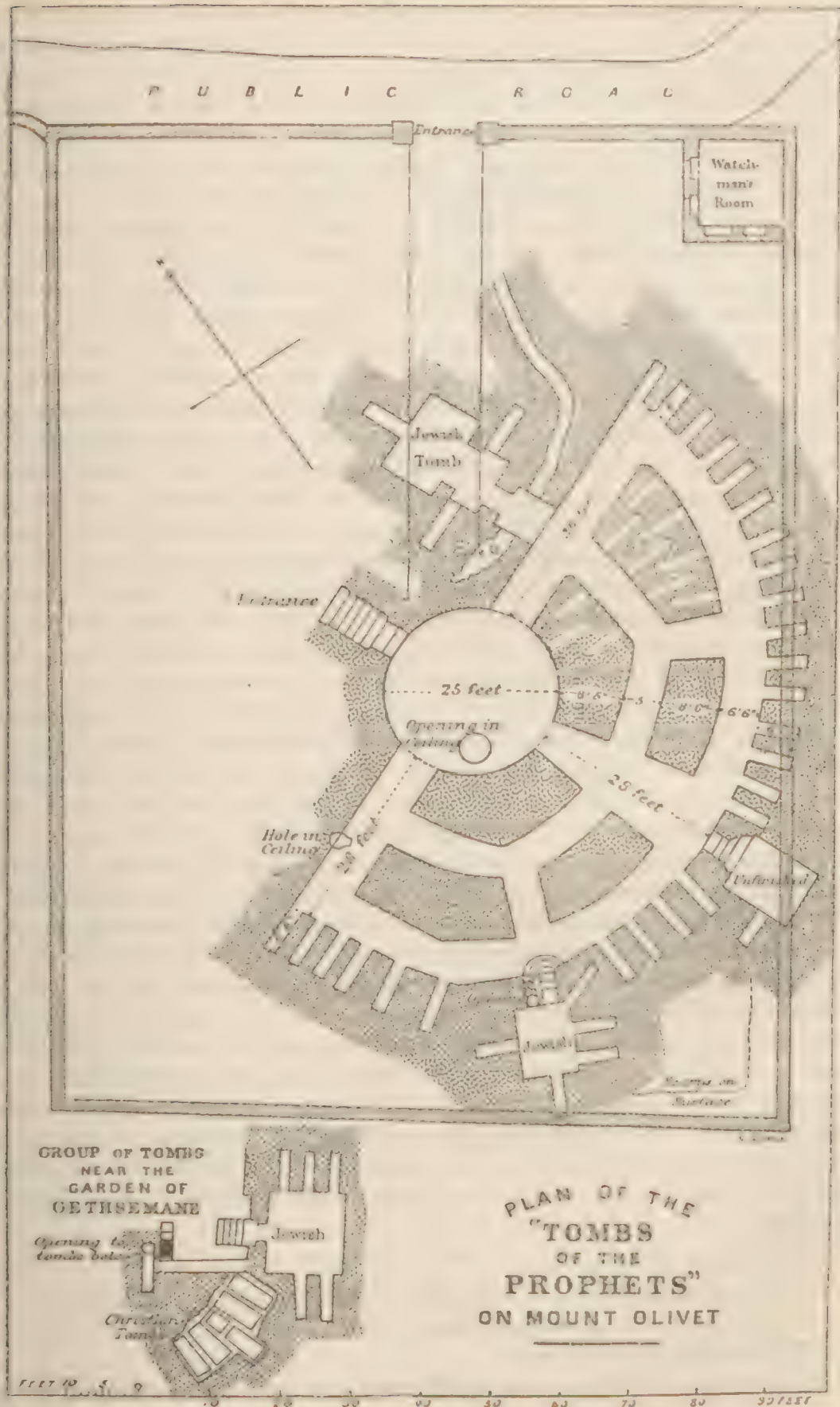
II.—THE TOMBS OF THE PROPHETS

Are mentioned in nearly every book on Jerusalem, but are seldom visited by travellers, or properly discussed by scholars, and, so far as I am aware, no correct plan of them exists. So when I heard several months ago that the Russian Archimandrite had bought the field in which they are situated, and was surrounding it with a wall, and people spoke of “passages” going through the Mount of Olives, and of inscriptions being found, I wished to go there and see, but was told I should wait until some disputes were settled. The Jews brought a law-suit against the occupation by the Russians, and it was decided in Constantinople that the place shall belong to the Russians, but they shall let the Jews visit their old tombs in it whenever they please. So of course I also could go there.

I found the place surrounded with a stone wall, with a wide and high iron door, and in one of its corners a little room, in which a black watchman is living with his family. The surface of the ground has been in some places cleared of earth, and several rock-cut tombs of the Christian period have come to light. The entrance to, and even the inside of, the “tombs of the prophets,” I found nearly untouched, almost as I had seen

¹ The City of Solomon within the first wall.

² Tobler “Golgotha,” St. Gallen, 1851, p. 164.



them many years ago. And in regard of inscriptions, I found those which are known for a long time already, and are of little value, being only slightly ingraved in plaster. I had taken with me a plan which I found in "Sepp's Jerusalem," Schaffhausen, 1873, vol. i, p. 286, and this plan I suppose is a copy of Pocock's, or Chateaubriand's, or of some one who visited Jerusalem from sixty to ninety years ago. I found the plan incorrect, and took measurements, so as to be enabled to make a more correct one, which I enclose herewith. These tombs appeared to me now in a new light, and I may perhaps be allowed to make some suggestions respecting them. All descriptions of them to which I can get access are more or less copies from those before. Robinson did not visit them. Tobler gives some details beyond others, but the Memoir of the Palestine Exploration Fund, Jer. vol., p. 403, gives a fuller account, as follows:—

"The so-called tombs of the prophets on Mount Olivet are situate near the top of the spur due east of the south-east angle of the Haram, some 300 yards south-west of the Church of the Ascension (in Ordnance Survey Map of Jerusalem, scale $\frac{1}{10000}$, where at the sharp bending of the road the word 'tombs' stands). There is a circular chamber (25 feet diameter), with two radiating passages leading to a semi-circular passage with twenty-four¹ kokim tombs. There is a parallel curved passage intersecting the radii nearer the central chamber, and at the end of this is a chamber reached by steps (going downwards), containing unfinished kokim. Two of the kokim in the semi-circular passage are tunnels leading to two inner chambers, one having two kokim, of which one is unfinished."² (Compare my plan with this description.) After speaking of the inscription, the account proceeds: "There can be little doubt that these tombs are Jewish, although the arrangement is unusual. Some circular chambers, with radiating kokim, have, however, been found during the survey in the western plain." (See Memoir, vol. ii, p. 32, &c.) But these are rather small ones,³ and the chamber not circular, but oval, as if the intended square was not worked fully out, as I have observed in several other tomb chambers, where the corners were rounded. All my explorations and studies of these matters have brought me to the conviction that the round form is Canaanitic, and the square Jewish. The Tabernacle, the altar, the Temple, and nearly everything which was connected with them were square; the laver and the two pillars, Jachin and Boaz, were exceptions, the circular form being natural for these. Among tombs also some exceptions may occur. But I cannot help considering the greater part of the "tombs of the prophets" as a Pagan form,⁴ although I am not able to say positively when they were made, or by whom.

¹ They are more in number.

² Hence made when the half-circle passage was made; the other has five kokim, and is older, formerly with an opening from the surface.

³ $9\frac{1}{2}$ feet by $8\frac{1}{2}$ feet diameter.

⁴ The symbol of Baal was a circle (the sun), of Astaroth a half circle, or the moon; theatres were round; Herod built his mausoleum round.

There are on the western slope of the Mount of Olives, a very large number of Christian tombs, which are easily recognisable. They are close to one another, fully expressing the *brotherhood* of the departed, whereas the Jewish tombs are always single, *i.e.*, contrary to brotherhood.

There are, besides the Christian tombs on Mount Olivet, also several regular Jewish tombs, which are certainly older than the Christian, and so one of the square chambers (the south-eastern of these "Tombs of the Prophets") is of Jewish origin and most probably older than the rest of the half-circular passages with their kokim. It is also higher, with steps leading up into the chamber; and so it was perhaps also with the north-eastern chamber, although this is on a level with the passages; as the ground there slopes downwards, this chamber could not be situated higher and have a roofing thick enough. But the chamber towards the *east* was made when the passages were made, and this explains the unfinished kokim. To me, it seems as if the *whole* is not finished, or, if it is finished, the purpose of the second half circle and the radiating passages is a puzzle. I think the intention was to make, in course of time, kokim in the remaining massive piers, which from their thickness it was possible to do, as I have shown by dotted lines in the plan. Was there some other purpose? As the passages are rather high (about 12 feet), and as the existing kokim in the large semi-circular passage are situated very near the floor, it gives the impression that the design was to make one or two other rows of kokim over them. If so, then it was meant to form a ground mausoleum, or, as I think, a kind of "Pantheon," if it may be so called—a place where eminent persons might find their resting place among men of their own rank.¹ This is a Pagan idea, not orthodox Jewish, and hence also a Pagan, *i.e.*, a Greek or Roman, form may have been adopted, and we find such a mixture of Jewish and Pagan.²

The mixture of Pagan and Jewish we can only put in the time shortly preceding the Christian era, and whilst this mausoleum was being constructed disturbances may have taken place in the country, which hindered the work, and Jerusalem being soon afterwards destroyed, it was never finished, but was used afterwards by the new population, especially by Christians, who I think plastered the chambers, as several other Christian tomb-chambers are also plastered, and in this plaster the inscriptions were engraved, being either the names of newly deceased persons buried there, or in memory of former occupants of the tombs. As there is a great accumulation of earth, it may be that when the place is thoroughly cleared out, something may be found, throwing more light on the subject. Meanwhile, I take leave to make the above suggestion, which I think is not more unreasonable than that of Mr. Lewin, who thought these caves and passages might be the tombs of the Israelite kings. (Lewin, "Siege of Jerusalem," London, 1863, p. 224.)

¹ Like the Walhalla at the Danube, in Bavaria.

² Of the many Jewish and Christian tombs combined I give an instance in the annexed plan; it is situated about 100 feet east of the Garden of Gethsemane.

I may add a few more remarks :—

The workmanship of these tombs is to some degree rude and not so good as that of the "Tombs of the Kings" (so called), but this is partly owing to the more brittle nature of the rock. The plastering gave it a more finished appearance. The kokim in the larger semi-circle are not all at equal distances one from the other ; and as will be seen on the plan, the round opening in the ceiling of the round central hall (giving scarcely enough light) is not in the central point, as one would expect, but a great deal out of it, which is rather strange. What might have been the reason for this I am not able to say. The entrance is very plain, it consists of a door not quite three feet wide, surmounted by a semi-circular arch, without proper mouldings.

The northern, or rather north-eastern, chambers, with a few kokim, and a narrow and low aqueduct-like passage,¹ I was not able to examine properly, as we found a large animal there, and we were not prepared for such a case, so my assistants, who were helping in measuring, were afraid to go further on. The cave, resembling a kok, but with uneven sides, marked in the plan, is a natural cleft in the rock.

III.—ON THINGS WHICH WERE EXPECTED TO BE FOUND IN MAKING THE RAILWAY.

I had it always in my mind to report upon any things of interest which might be found during the construction of the railway from Jaffa. But I heard of nothing, and once, when the chief of the works was here and I was introduced to him by Mr. Frutiger, amongst many other things, I asked him also about antiquities or interesting ruins which they might have discovered. But he said : " We found hitherto nothing of the kind. We do not carry the line through those ancient sites. They always now form smaller or larger hills where we should have more to do, and we choose the level ground as much as possible, and not one of these mounds was opened by us." He also said that there is a tract of land where the natives refuse to work because it is cursed, so that they were obliged to put Italians there. But all of them became ill sooner or later, and they had therefore to change them frequently. The reason of this he could not tell. It was fortunate that not much had to be done there !

Recently I made inquiries again, but with the same negative result, viz., that no antiquities of importance were found.

There was a rumour that an interesting inscription was found at the railway works near Bab El Wad, but when I made close inquiry I learned that it was the one found by Mr. Bliss at Tell el Hesi.


¹ I think this was a drain to carry off the water gathered there in the winter season.

IV.—NEWLY DISCOVERED ROCK-CUT PASSAGES.

A few weeks after the work of the railway began at Jerusalem I heard that large aqueducts had been found near the German colony. So I went there and inspected the place—but was disappointed. I hoped to find a real aqueduct, but it was simply a rock-cut tunnel or passage of no great length, with its floor rapidly falling towards the south. Opposite was another, which people thought to be the same, but they are situated at different levels, although both are of the same kind. They are cut entirely into the rock about 2 feet or more wide and 5 feet high. At the place where the new road was made I could go in to the northern one, and found that it ends abruptly under the middle of the (new) road. Its bottom rises towards the north, but there is an opening in the roof by which much earth had fallen in, and so I could not go further; but got the idea it very likely goes into the pit or "cave" there,¹ under the Greek orchards, which at first sight seems to be a Jewish rock-cut tomb, but on closer examination is found to have been originally a cave dwelling and afterwards used as a tomb. What was the use of these passages? This is rather difficult to say. To me it seems they were places where treasure, or perhaps corn, might be put in time of danger, at a period when people lived in caves. The southern passage is full of earth, so I cannot tell its length.

V.—THE SEB'A RUJÛM.

In the *Quarterly Statement* of 1890, p. 22, I reported on the seven large stone heaps called "Seb'a Rujûm," and suggested that if they were opened something interesting might be found in their inside. Having heard that the railway people are taking materials from them for the railway, I went there to see what might have been covered up. I found that only from one or two of them had stones been removed and not enough to show what was *inside*. I found a temporary *rail* from one of them to the railway, on which cars were running to and fro, and on that side a good many stones were removed, but the centre had not been nearly reached. The stones inside are of the same size as those on the surface, the largest not being larger than a man could carry. One could also see that there is no earth between the stones and that they lie on the surface of the red earth, not on rock. That is, when the mounds were made, no earth was removed in order to erect the pile on the rock itself. The land is now being sold there—so very likely houses will be built in the neighbourhood.

¹ It is marked thus  in the Ordnance Survey Plan, scale $\frac{1}{2300}$.

VI.—OLD REMAINS AT THE SANATORIUM.

In the Ordnance Survey Map of Jerusalem, scale $\frac{1}{100,000}$, there is inserted on the north-west of the city a piece of ground with a building in its centre and named "Sanatorium of Protestant Mission," near the point where the roads from the Jaffa and the Damascus Gates unite. This ground belongs to the London Jews' Society, and I had to build there a rather large building for a girls' school. On clearing the ground I found towards the west-end of the field some rock-like large stones in two lines about 18 feet distant one from the other, as if there had once been a tower or chamber there, although I did not find any *corners*. Between these rows of large stones were found a great many pieces of *pottery* of all sorts, and as it seemed to me, according to Professor Flinders Petrie's theory, of all ages. So I hoped to find here at least a cistern, or a pool, if not a spring. But when all was cleared away I found only the bare rock. That these remains dated from very ancient times was clear, not so clear what they might have been. One of the rows formed a slight curve, so I thought it might on this side have been semicircular. *Outside* the rows of large undressed rock-like stones not *any* pottery was found.

VII.—KHURBET RAS EL-ALWEH AND BURJ EL-TUT.

Fourteen years ago, when so much rain fell that the torrent carried away the stone bridge in the Kulonieh Valley, over which the main road to Jaffa passes, I was asked to erect a temporary bridge of wood as quickly as possible, which was done. This bridge lasted six years, and was then replaced by the present stone one.

When erecting the wooden bridge I levelled from the river bed up the road towards Jerusalem, and especially the steep ascent, in order to find for the carriage road a better line than the many and small zigzags, which were not according to my ideas. In doing so I came on the eastern slope of the valley, near the top of the hill, to a ruined place where I found a round thick pillar standing in the earth, and, as it seemed to me, still *in situ*; on asking some natives of Lifta, who were assisting me in the work, for the name of the ruins, I was told "Khurbet Ras el-Alweh," which name I found in later years inserted in the large map of the Palestine Exploration Fund. The natives spoke of a church which was once standing there. Traces of a road once leading from the place to Jerusalem are still visible. Some years later, when I read in the *Quarterly Statement* for 1888, p. 263, the suggestion by Dr. Chaplin that the place of Eben Ezer might be looked for between Nebi Samuel ("Mizpeh") and the modern village Deir Yesin, which he took to be "Shen," and "Beth-car" to be the present 'Ain Karem (1 Sam. vii, 11, 12), the pillar in the ruins of Khurbet Ras el-Alweh came into my mind, and the desirability of digging there to ascertain what the pillar

really indicates; the more so, as the late General Gordon took up the same idea, only he put Eben Ezer a little more east, and nearer Jerusalem, at Khurbet el-Bukeia.

A man of Lifta asked me for work, whom, with his sons, I had often employed as labourers, when erecting new buildings. I told him he could, with his two boys, work on my account for a few days at this place, and mentioned expressly the pillar—to which he agreed, saying that the place belonged partly to him. After a few days he came and reported what they had found. But from his description I found that he had worked at another place, and not at the one I meant. Then he said, "Oh! you mean the more distant ruin?" and as of this also he is part proprietor, he undertook to dig there and bring me a report. When he had done this I went there, but found not what I wished or expected. The pillar is not *in situ*, but standing on its top (*i.e.*, upside down), and simply on earth or rubbish. It is clear that it once stood a little higher up the slope. Its foot is squared, as if once intended to be put into a square hole, either of masonry or hewn in the rock. The man also spoke of a former "church," but I found no signs of one.

The place was once of some importance, not on the very top of the hill, but on its southern slope, although the upper parts are near the top, which is now a flat piece of ground, and, as it seemed to me, once embraced with a wall, in which was towards the west a tower, and in the north-eastern part is a large cistern. There is also a cistern in the ruins themselves, which once covered a square about 100 paces long and broad, the south-eastern corner of which is fully occupied with *débris*, whereas the rest towards the west and north-west had only a few small buildings. The southern wall is better preserved than the others, being lower, so that the *débris* fell upon it and covered it. It was of stones 2 feet 3 inches high and 3 feet long, very nicely cut, with smooth faces, and without any bevel or marks. The pillar is only a fragment 3 feet 8 inches long, and 2 feet 3½ inches diameter. One side of it is well preserved, the other weather-worn. It stands now about 15 feet from a lintel of a former door. Close to the latter and a little higher is a conical heap of *débris* and stones, round which is a free space, as if once a road about 18 or 20 feet wide went round it, and then joined the road going towards Jerusalem. I think the pillar stood on this separate building, and when the place was destroyed tumbled down the slope. From these ruins one has a very nice view towards the south and south-west, especially down the large valley and the mountains on both sides, to Kûryet S'aldeh, Sâtâf, &c., and from the top of the hill there is a view all round up the deep valley to Beit Hanina, Er Ram, and other places on both sides.

On the old road towards Jerusalem from this place there is, on the north, the highest peak of this range of hills, covered with a heap of stones (not given in the map), which is called Rujum Medafeh, the Cannon Heap, or Heap for the Cannons; and a little further to the south a ruin called Kasr el-Beda, the white tower.

Burj 'el-Tut, a little north of the Jaffa road. It was here the man had digged first, as above stated, so he brought me to the place, to show what he had done. In the "Memoir," vol. iii, p. 91, it is said, "a vault, rock-cut cisterns, and tombs—square chambers without loculi—these belong to the village of Lifta." To this short description I wish to add: The vault consisted originally of a three-fold one, each parallel to the other, and apparently Crusading. Besides, there were a few other houses, also a large cave—a pool cut in the rock, and water channels. The "pillar," of which the man had spoken, proved to be the stone of a press. It is round, 3 feet 10 inches in diameter, 3 feet 9 inches high. On the upper surface, which is straight and smooth, is a round depression 1 foot 9½ inches deep, a little conical upwards, and so on the top 1 foot 3 inches wide, and at the bottom only 10 inches. On opposite sides of the pillar are two recesses, cut into the stone, 4 inches deep, 9 inches wide, and 1 foot 9 inches long, or downwards from the upper surface, below a little wider than on the top, so that a beam of wood, shaped in the same way and put upright, could not move. Several pieces of glass, and a good many small tesserae were found, also another stone which belonged once to a mill, similar to that which I have described as found at Khurbet Jubeiah.

VIII.—ANSWERS TO QUERIES.

In the *Quarterly Statement* for January, 1893, p. 68, are some notes and queries to which I would give answers.

"II. Mr. Schick does not state the general position of the mosaic he describes in *Quarterly Statement*, 1892, p. 190. . . I conclude the lozenges are made too narrow, &c. . . He states that they are not square. . . It seems to me this cannot be. . . *This* is probably the error in his drawing which he refers to, as compared with a photograph."

Answer: The position of the place is fully described for one who knows all that has been published respecting the ground of the Dominican brethren, especially *Quarterly Statement*, 1891, p. 211, where the traces of a church are described.

With regard to the narrowness of the lozenges, I can only say they are narrower than long, and hence not square.

III. That I have not given the measure of the eastern chamber of Gordon's Tomb.

Answer: Finding by experience that people become disgusted and weary by so many details of measurements being brought into the text, and pass them over and do not read them, I give as little as possible, but refer to the plans where all measurements may be obtained, and all my plans are drawn to the annexed scale. Also I am not an infallible man, and may sometimes forget something which I ought to mention. The mistake in the direction of the magnetic needle is not mine, but the lithographer's.

IV. Tomb near Bethany, *Quarterly Statement*, 1890, p. 249. "Some of the measures do not exactly agree with the text."

Answer: I have compared both carefully, and found this to be the case only in the innermost chamber. This also may arise from the lithographer not fully understanding the meaning. In numbers written on a small scale and on thin tracing paper, it is very easy to misread. But the real measures can always be found by the student with the compasses on the drawing itself.

So far as concerns my own work; but the gentleman goes on to ask further:—

"V. Can anyone state the accurate dimensions of the chamber in" (he probably means under) "the Sakhra."

Answer: They are given in the Ordnance Survey of Jerusalem, made by Sir Charles Wilson, and published by the authority of the Lords Commissioners of Her Majesty's Treasury, 1865. Plate 2 gives the "Kubbat Es Sachra" in scale $\frac{1}{200}$ and also the rock and its cave.

"VI. Can anyone say whether a window into a tomb is very rare?" Answer: Yes, very rare. "Or are there other caves like 'Gordon's Tomb' and 'Conder's' in this feature?" Answer: There are some other tombs which have such openings. For instance, that of Simon the Righteous. The two holes in "Conder's Tomb" (Jerusalem Vol., p. 433) on either side of the entrance are small holes broken in, as if not there originally. South of Jerusalem, near Aceldama, there are also a few tombs which have small windows, but such tombs are rare.

ANTIQUITIES FROM CÆSAREA, &c.

By F. ROBINSON LEES, F.R.G.S.

THERE has been another discovery of antiquities at Cæsarea. A very fine head was brought to me a few days ago which I photographed (copy enclosed), but returned without purchasing, as the price was too high. You will see by the photograph that it was in a fair state of preservation, the nose, lips, and chin being but slightly damaged. It was about 10 inches high and 18 inches in circumference, very artistically and tastefully carved, evidently resembling some Roman maid or matron.

Glass and Pottery.—From the same place I received some very fine pieces of glass, pottery, and lamps. The former are among the finest specimens I have ever seen, not only on account of their iridescence, but more especially their shape and delicacy of form.

Unfortunately very few particulars of the place of their discovery came to hand with them. They were brought by a peasant who was under the impression that he had found something of great value, and through fear of the Government hastily removed them from their original resting place without paying the least attention to its position and

appearance. I presume they came from some tomb. The pottery, tear bottles and lamps, that accompanied them point to this conclusion. The stems of the glass tear bottles are long and slender, while their bases are broad and flat.

The pottery jars, with the exception of the very long one which exhibits traces of paint on a coarse red-brown ware, are grey in colour and rough in texture, though one seems to have become grey through its contact with earth, as a light red appears in certain places. Another has been subject to the action of water through limestone rock, as there is a very fine crust on one side.

They cannot all have come from the same tomb, unless it was used a second time after the lapse of many years, as they must be assigned to dates that very widely differ. While some are apparently Phœnician, the others are Roman.



TOMB WITH INSCRIPTION NEAR GARDEN OF GETHSEMANE.
(From a Photograph.)

Two of the lamps are very common and as poor in quality as the ordinary Christian lamps amongst which these may be classed: but the two that occupy the most prominent position in the picture which I send are very beautifully and neatly made, showing more care and skill than was usually bestowed on Christian lamps: besides, they are of an altogether different style. I have several others nearly like them that came from the coast, but have not yet been able to classify them.

A Sphinx made of Lead.—The most curious thing that was brought with this miscellaneous assortment from Caesarea was a piece of lead, cut from a larger piece, with a Sphinx on it in high relief. It shows but poorly in the photograph, as it was formerly painted a yellowish white colour, some of which has peeled off, but the remainder adheres so strongly to the lead that I could not remove it. It was $4\frac{3}{4}$ inches long and

4 inches wide, and reminded me somewhat of another piece of metal in my possession with an eagle on it, which you will find mentioned in the *January Quarterly Statement*, 1892, p. 40.

But in the case of the Sphinx, which I am sorry to say I refused to purchase, the metal is very different, being unmistakably lead. The man



MOSAIC PAVEMENT ON MOUNT OF OLIVES. (From a Photograph.)

who brought it said it was cut from a coffin. Though very little reliance can be placed on his story, yet I am inclined to think, considering its association with the other emblems of a tomb, that his statement contains a germ of truth.

Since I first came into possession of the former piece of metal with

the eagle on it, which I thought was some heraldic device or token, I have re-read Major Conder's "Syrian Stone Lore," and find on p. 95, "The Phœnicians also used wooden coffins with metal clamps and medallions, and at a later period are even thought to have used lead."

Tomb near the Garden of Gethsemane.—In the grounds of the new Russian church adjoining the Garden of Gethsemane, and at the extreme south-east corner of the part enclosed by the new wall, a tomb has been recently found. The entrance is formed of masonry, and on the lintel stone is the Greek inscription shown in the picture, a photograph taken by a Russian living under the church. The interior of the tomb was formerly a cave, whose sides were roughly hewn and three loculi sunk round the floor, one facing the entrance, and the two others on the right and left hand sides. Everything about it, as far as can be seen at present, which is very little, as it has not been properly cleared out, with the exception of the inscription, is very rude and bare. There is an inner chamber which has not yet been excavated. The first room which is reached after dropping through the doorway by a descent of three uneven steps, is $10\frac{1}{2}$ feet by $8\frac{1}{2}$ feet. Three lamps and eight pieces of glass, five of which were broken, were found there when it was opened.

Mosaic Pavement on the Mount of Olives.—A beautiful mosaic pavement was discovered about a week ago on the summit of the Mount of Olives, close to the foot of the Tower. To preserve it from the vandalism of passing tourists and pilgrims it has been covered again by a foot of earth, but not before the Russian photographer obtained a picture of it, which I enclose. When I was up there the other day it was impossible to accurately measure it for the reason above mentioned, although I had already seen the photograph. It seemed about 5 yards square, and on three of its sides were thick pieces of cement, evidently the remains of the sides of a room, as they were in an upright position. The narrow portion, where there is an Armenian inscription, is a small passage leading to a piece of ground as yet unexplored.

Lying as it does so near the pavement which has been known and exhibited so long on the Mount of Olives, it evidently points to some connection between the two; when they were perhaps both under some important edifice belonging to the Armenians, who formerly owned this property.

The following transcription of the Greek inscription alluded to above in Mr. Lees' paper has been kindly furnished by A. S. Murray, Esq., LL.D., of the British Museum:—

† ΘΙΚΗΔΙΑΦΕΡΟΥ
CΔΜΔΜΔΚ
ΔΛΙΤΧΝΟΥΚΤΩΝΤΕΚ

† Θήκη διαφέρου-
σα Μάμα κ-
αλ(λ)ιτέχνου κ(αί) τῶν τέκ(νων)

The inscription indicates the private burying place (*θήκη διαφέρουσα*) of one Mamas and his children. I am not sure of the reading, *καλ(λ)τέχνου*, which would describe Mamas as an artist or skilled workman: but such an epithet would be in accordance with usage on these Christian tombs. The name Mamas occurs as that of a martyr whose tomb in Cappadocia, I think, is mentioned in Sozomenos, *Hist. Eccles.* v. 2. There, however, the genitive of the name is *Μάμαντος*. The writing of the inscription is of a late period, as may be seen in the form of the *Δ*, and in the *Θίκη* for *θήκη*. There are two marks at the beginning of the second line which I do not understand.

A. S. MURRAY.

LETTER FROM REV. J. E. HANAUER.

1.—ST. MARTIN'S CHURCH AND OTHER MEDIEVAL REMAINS.

My daily work frequently takes me into the crooked lanes of the Jewish quarter of Jerusalem, and I have often wondered what building certain remains of mediæval doorways and the corner of a building with "bossed" or bevelled crusading masonry under the Mughraby Synagogue belonged to (No. 43 on Ordnance Survey Plan of Jerusalem, 1863-4). They are in the angle formed by Harat el Yehûd and the Tarik Bab Es Silsile, and I thought they might have belonged either to the missing Church of St. Martin (Pilgrim Text Society's "The City of Jerusalem," p. 19, and footnote to p. 18) or to St. Peter's ad Vincula. Mr. Schick, however, who at my request very kindly accompanied me to the spot and concurred in my opinion that they must have belonged to some ecclesiastical edifice of the middle ages, informs me that Tobler was of opinion that St. Martin's stood on the site now occupied by a mosque with minaret south of the "Churwe" or Great Synagogue of the Perushim Jews (No. 57, Ordnance Survey). The said mosque still has a little court in front, *i.e.*, west of it (*see* Tobler's "Topographie von Jerusalem," vol. i, p. 425), and thus answers to the description of St. Martin's, as it also does in being on the left, *i.e.*, on the eastern side of the street of the Arch of Judas. It is curious to find that the third feature in the description, *viz.*, that there was an oven close by and situated opposite to it, also still exists ("Furnus ante ecclesiam S. Martini," "Cartulaire de S. Sep. 331, Tobler," as above), though it seems to have escaped Tobler's notice. Just opposite the mosque and on the west side of the Harat el Yehûd there are indications that the little street, which here runs across from it to Harat el Jawany (the latter running parallel with but at a higher level and a little further west of the Harat el Yehûd), was originally much broader than it is now, and just where, when that was the case, it opened into the Harat el Jawany there is an old mediæval chamber in which there still is an oven. The position of this bakery, were the modern buildings between it and the Harat el Yehûd

removed, would be seen to be exactly opposite the above-mentioned mosque.

2.—THE MALADRERIE.

Inside the city wall and immediately west of the Damascus Gate there is a ruin of some extent containing ancient vaults of a distinctly crusading character, one of which, now used as an oven, is called "Furun el Jardoun," i.e., "Oven of the Rat," because, as I was told by an Arab whom I met there, it is said to have once belonged to a man called El Jardoun, who, dying childless, left it and another vault adjoining, now occupied by stone-dressers, but once used for a mill, to the Greek Convent. I would suggest that in these ruins of El Jardoun we have traces of the Maladrerie or Leper's Hospital, which, situated immediately west of the Damascus Gate and close to the walls, was, in 1888, "not recognisable" (Pilgrims' Text Society's "City of Jerusalem," footnote, p. 16). It seems not unlikely that the name "El Jardoun" is derived from the *purely colloquial* Arabic word "El Jordan," which is a name for leprosy. Through the crusading lazaret-house, or through a postern therewith connected, entrance could be obtained to the city when the other gates were closed, as on the occasion of which we read in Besant and Palmer's "History of Jerusalem," p. 384 : and it was through this postern that the Saracens, when masters of the city, were wont to admit Christian pilgrims.

3.

In the Rev. H. Crawford's Journal dated February 8th, 1857 ("Jewish Intelligence" for July, 1857, p. 221) I find the following allusion to the phenomenon spoken of in my note on "Mud Showers in Palestine," p. 69, *Quarterly Statement*, January, 1893 :—"We spoke of a storm of liquid mud which visited Jerusalem the other night plastering the houses from top to bottom as with a reddish ochre (Dr. Roth, an eminent German naturalist now in Jerusalem, states it to consist of a species of animalcules). Raphael, a young man who lives with R. N——, said it reminded him of one of the plagues of Egypt."

4.

February 21st, 1893.

When in the Jewish quarter a few days ago, I availed myself of an unexpected opportunity of getting into the house immediately abutting upon the north side of the small mosque with minaret, called by some the Mosque of Omar il Khattab, and by others that of the "Bashashteh" or of "Abu Seud," situated, as described in my last, south of the great Ashkenazim synagogue in Harat el Yehûd, and found there a very remarkable double mediæval vault, lying east and west, about 30 feet long (I had unfortunately no tape with me at the time of my visit, and was unable, on account of sacks of grain and heaps of corn stored up in the place, to measure it in paces), and with a colonnade, four pillars at least of which, with heavy circular capitals, of a sort of debased Byzantine-Doric style,

are still in position, running down the centre of the double vault and supporting the roofs, whilst in the present south wall of the southern portion of the double vault I detected a similar capital peeping through a mass of rubble masonry now serving as the south wall, but which probably encases a second similar colonnade running parallel to the other. The southern portion of the double vault seemed to me to be considerably broader, though not much higher, than the northern portion running alongside it, whilst in the yard of the mosque there is a good masonry pier with the spring of an arch on its northern face near its present top. I can therefore not help thinking that in these remains, which I hope Mr. Schick will in due time plan and report on, we have portions of the central nave and northern aisle of the church of St. Martin, and in the pier in the mosque-yard and capital, peeping (as above described) through rude masonry, vestiges of the southern aisle, part of which latter is in all likelihood incorporated into the mosque itself. The bases and pedestals of the four columns separating the northern aisle from the central nave are buried, probably to the depth of 5 feet or 6 feet, in *débris*, their capitals being at present about 4 feet above the ground. The intercolumnar spaces at the present eastern and western ends of the double vault had been, at some time or other, blocked up with rude masonry, and transverse rubble walls built so as to form rooms; but these walls have fallen into ruin, and are now in some places removed, so that one can see from end to end of the place. In the northern aisle there is a heavy circular stone trough, perhaps at one time belonging to a font. I did not notice traces of an apse. Mr. Lees has kindly promised to try to photograph the interior of the vault for the Fund.

ON THE STRENGTH OR PRESSURE OF THE WIND AT SARONA, RECORDED DAILY BY HERR DREHER IN THE TEN YEARS 1880 TO 1889.

By JAMES GLAISHER, F.R.S.

(Continued from January "Quarterly Statement," p. 63.)

ON THE PRESSURE OF THE WIND IN STRONG WINDS AND GALES AT SARONA, FROM THE YEAR 1880 TO 1889.

By collecting all pressures of estimated strength 2 and higher, independent of direction, the next table, showing the frequency of strong winds for the different months of each of the years 1880 to 1889, was formed :—

TABLE XXXIV.—Showing the number of winds estimated 2 and higher, in every month in the ten years, at Sarona :—

Months.	1880	1881	1882	1883	1884	1885	1886	1887	1888	1889	Sum.
January ...	3	3	2	4	4	6	4	7	3	2	38
February ...	4	11	5	4	6	1	5	5	4	3	48
March ...	6	9	2	4	3	1	7	5	9	7	53
April ...	6	9	7	0	5	3	2	6	9	2	49
May ...	1	3	2	0	2	2	3	1	5	1	20
June ...	3	0	1	0	3	5	1	2	4	0	19
July ...	0	2	1	0	2	3	2	0	0	1	11
August ...	0	1	0	0	1	4	2	4	0	0	12
September ...	3	1	0	2	1	1	4	1	0	1	14
October ...	1	1	5	1	1	5	3	0	2	1	20
November ...	5	8	1	2	3	3	3	0	1	4	30
December ...	8	0	3	3	1	5	3	3	3	6	35
Sums ...	40	48	29	20	32	39	39	34	40	28	349

From this table we see that in many months, chiefly in the summer, the pressure of the wind has always been less than the estimated value 2, and that in many other months there have been but one instance in the month of this pressure having been experienced. The month with the greatest number of strong winds is February, 1881, and the next in order are March and April, both in the years 1881 and 1888.

The numbers in the last column show the number of winds of estimated strength 2 and above, in the ten years; the smallest numbers are 11, 12, and 14 in the months of July, August, and September respectively, and the largest numbers are 48, 53, and 49 in the months of February, March, and April respectively.

The numbers at the foot of the column show the number of such estimated winds in each year; the year with the smallest number, 20, was 1883, and the next in order of fewness were 1889 with 28, and 1882 with 29. The year with the largest number is 1881 with 48, and the next in order are 1880 and 1888, both with 40. The total number of such winds in the ten years was 349.

By collecting all pressures whose estimated force was 2 or higher, under each direction of wind in each year, the following table was formed :—

TABLE XXXV.—Showing the number of strong winds of 2 and above, in each direction in the ten years, at Sarona :—

Years.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Sum.
1880	0	1	2	3	10	13	10	1	40
1881	2	0	4	2	12	15	11	2	48
1882	0	0	3	4	7	12	2	1	29
1883	0	0	2	0	4	6	3	0	20
1884	1	0	1	1	10	8	9	2	32
1885	4	2	2	2	7	16	5	1	39
1886	1	0	1	0	14	14	6	3	39
1887	1	0	2	1	5	17	8	0	34
1888	1	0	1	3	5	20	9	1	40
1889	0	0	2	1	11	12	1	1	28
Sum	15	3	20	17	85	133	64	12	349

From this table we see that there was no instance of a strength of wind of estimated force 2 :—

From the N.	....	....	....	in the year 1880.
„ N.E.	....	....	....	„ 1881.
„ N. and N.E.	....	....	....	„ 1882.
„ N.E., S.E., and N.W.	....	....	....	„ 1883.
„ N.E.	....	....	....	„ 1884.
„ N.E. and S.E.	....	....	....	„ 1886.
„ N.E. and N.W.	....	....	....	„ 1887.
„ N.E.	....	....	....	„ 1888.
„ N. and N.E.	....	....	....	„ 1889.

The largest number of instances of such winds—

In 1880	was 13	from S.W.
1881	„ 15	„ S.W.
1882	„ 12	„ S.W.
1883	„ 6	„ S.W.
1884	„ 10	„ S.
1885	„ 16	„ S.W.
1886	„ 14	„ S.W. and S.
1887	„ 17	„ S.W.
1888	„ 20	„ S.W.
1889	„ 12	„ S.W.

The numbers at the foot of the table show the total number of instances of such winds of such strength in the ten years. The smallest

number is 3 under north-east, the next in order is 12 under north-west, and 15 under north. The largest number is 133 under south-west, the next in order are 85 with south, and 64 with west. In the ten years the south, south-west, and west winds number 252 of the strong winds out of the 349, the total number, thus leaving 67 only for the remaining directions.

By collecting all strong winds in each year, and arranging them under the different estimated strengths, the next table was formed.

TABLE XXXVI.—Showing the number of strong winds of 2·0 and above 2·0 in estimated strength in the ten years, at Sarona :—

Years.	Estimated strength of the Wind.								Sums.
	2·0	2·5	3·0	3·5	4·0	4·5	5·0	6·0	
1880	23	3	7	0	3	0	3	1	40
1881	30	3	10	0	5	0	0	0	48
1882	15	5	6	0	3	0	0	0	29
1883	9	3	4	0	3	1	0	0	20
1884	18	2	3	4	1	3	1	0	32
1885	23	2	7	0	6	0	1	0	39
1886	23	4	6	1	2	1	1	1	39
1887	26	1	2	0	4	1	0	0	34
1888	20	8	5	0	4	0	0	0	40
1889	22	0	6	0	0	0	0	0	28
Sums ...	209	31	59	5	31	6	6	2	349

From this table we learn that in the years 1881, 1882, and 1888, that the greatest pressure of the wind was the estimated force of 4, and that the greatest pressure in the year 1889 was estimated as 3, of which there were six instances. So that two or three years together may pass without a greater strength of wind than estimated 4.

It is to be noted that the year 1886 is the only one with a number under all the different pressures.

The number of instances of estimated force 2 outnumbers all the other pressures; the greatest number in one year was 30, in 1881, and the least was 9, in 1883. The total number under 2, in the ten years, was 209, leaving 140 for all other pressures, of which six appear under 5, and two under that of 6.

The high pressure of 5 took place three times in 1880, viz., on March 15, from the west; on December 8, from the west; and on December 13, from the south-west: the next instance was in 1884, on

January 21, from the west; the next in 1885 on May 22, from the north; and in 1886, on January 4, from the south. The instances of the strength as 6, are two in number, viz., the first in 1880, on October 18, from the west, and the second in 1886, on January 5, from the north-west; on the day preceding, January 4, the wind was from the south with strength 5. On all these dates the weather is described as stormy or terribly stormy, and generally accompanied with thunder and lightning, I am inclined to think that both the estimated numbers 5 and 6 are over-estimated, for there is no mention of uprooting trees or damaging buildings in the journals on these days. Of these eight gales, four were from the west, one from south-west, one from south, one from north, and one from north-west, and three took place in January, two in December, one in March, one in May, and one in October. So that in these ten years no heavy gale has taken place in the months of February, April, June, July, August, September, or November.

NARRATIVE OF A SECOND JOURNEY TO PALMYRA,

including an exploration of the Alpine regions of Lebanon and Anti-Lebanon, and the southern half of the Nusairy Chain.

By REV. GEORGE E. POST, M.A., M.D., F.L.S.

(Continued from January "Quarterly Statement," p. 43.)

Wednesday, August 6.—We left Bibnîn at 7 a.m., passing by the fountain from which flows the limpid stream by which we had encamped. We then struck over the foot-hills in a direct course to *Judaideh* and *Zohr-el-Husein*. From these villages a fine view is obtained of *Jebel Furbul*. This outwork of Lebanon is a peak about 2,000 feet high, separated from the *Dunnîyeh* by the broad valley of the north branch of the Kadisha River. From its isolated position it is one of the most prominent points of the landscape from every part of the plain of 'Akkâr, as well as from Tripoli, and from all the commanding shoulders of the *Dunnîyeh* itself. The stratification of its limestone rocks is singularly plaited and twisted.

From *Zohr-el-Husein* we plunged into the deep gorge of the Nahr-el-Bârid, just below where its north and south forks join to form the main stream. The views looking up the gorges, with their numerous branch ravines and rugged mountain peaks, many of them heavily wooded, and backed by the giant mass of Makmel, recall some of the finest scenery of the Alps and the Tyrol. In the river valley we found a few peasants who put us on our track. We took a refreshing bath in the cool, clear water of the north branch, and then crossed the tongue of land which separates it from the turbid waters of the south branch, yellow with sediment brought down by the melted snow of Makmel. Crossing this

branch we climbed the steep mountain by a winding pathway, through woods of pine and scrubs of *Arbutus* and *Styrax* to the plateau of the *Dunūyeh*. Winding now around and now over the hills we passed through *Harf Zeil*, *Baqrān*, and *Qar'aun*, above which we struck the main road from Tripoli to *Sir*, a well travelled and fairly graded mule-path. This soon led us to the aqueduct, which flows down from *Sir* to water the flanks of the mountain about the villages through which we had come. We sat down by this canal to take our lunch, under the shade of some magnificent walnut trees. A special feature of our meal was our grapes, cooled in the almost icy stream.

The *Dunūyeh* is one of the best watered districts of Lebanon. The springs are numerous and large, and all icy cold. Their surplus water is carried in canals along the sides of the intricate ravines, and distributed to the terraces, which hold the soil laboriously collected from the crevices of the rocks. This soil gives roothold to the mulberry trees, which constitute the wealth of Lebanon.

After our luncheon we continued our journey, partly by the side of the canal and partly on it. We reached *Sir* at 1½ p.m. The barometer at 2 p.m. read 27.33 ; height, 2,950 feet.

Sir is a poorly built village, the houses mostly in the mulberry orchards. Cold streams flow everywhere through the lanes and gardens, carrying fertility and beauty wherever their life-giving waters come. The constant murmur and plash of these waters gives a charm to life in *Sir* greater than that of most Lebanon villages.

To the east of the town rises the great wall of the lower terrace of *Makmel*. It resembles very strikingly the *Gemmi*. It is difficult to imagine from below a path up the side of this almost perpendicular cliff, which rises 2,000 feet above the plateau of *Sir*.

After our incessant and long journeys it was refreshing to be able to spend an afternoon of rest amid such magnificent surroundings. We could almost imagine ourselves at *Leukerbad*, waiting to climb the *Gemmi* on the morrow.

Thursday, August 7.—We started at 7 a.m. to scale the precipice. The path was a zigzag one, often almost dangerous, but an hour's stiff work brought us to the top and into an alpine plateau, 6,500 feet above the sea, where, somewhat to our surprise, we found a wheat farm and harvesters gathering in the grain, as well as numerous shepherds pasturing their flocks on the stubble. From the upper end of this valley, which was fringed with oaks, cedars and junipers, we passed into the bare alpine wadies which rise by an easy grade above the zone of trees, then of shrubs, into that of the snowdrifts and the clouds. In the upper region of shrubs we encountered camps of alpine cheesemakers, as in the lofty meadows of Switzerland. Numbers of savage dogs bayed at us as we passed. We threaded these upland valleys through the whole forenoon, with shingle and gravel under foot, very easy to all the horses except my own which began to feel a nail driven by a careless farrier into the quick of one of his forehoofs at *Tel Kelakh* two days before. By noon we had

reached the top of the *Zohr-el-Qodib*, and sat down to lunch by a snow-drift a mile long, and 20 to 30 feet high. In the centre of this drift was an ice cavern, going 30 feet into the heart of the mass, with streams of melted snow trickling from its roof, and flowing away into the funnels in its floor to replenish the cold fountains of the *Dumiyeh*. We sank our tin of grapes in a pool of ice-water, while we sat down on the gravel outside the cave to keep warm in the sun. The barometer at 1½ p.m. read 21.33, making the height 10,210 feet. This is the highest peak of Lebanon. Our horses showed plainly the lassitude produced by this great elevation.

The range of *Zohr-el-Qodib* consists of two parallel ranges of hills separated by a broad valley. The snowdrifts occupy the northern faces of these hills, and the funnels between them, and in the central valley. This valley ends towards the south, in the *Fim-el-Mizab* (the mouth of the waterspout or leader). The hills to the east of the valley are very much steeper but not quite so high as that on the north-west, and slightly higher than that on the south-west which overlooks the Cedars.

On the summit we collected *Cerastium trigynum*, Boiss., *Astragalus hirsutissimus*, D.C., *Trifolium modestum*, Boiss., *Poa*, sp., *Catabrosa aquatica*, Beauv., var. *chionophila*, Post, *Androsace multiscapa*, Duby.

From the summit we came down by a steep, rocky slope into the valley between the two ranges. On our way down we collected *Oxyria digyna*, L., and *Pisum formosum*, Stev. A little further along, in the valley, *Carex stenophylla*, Wald., var. *planifolia*, Boiss., and everywhere on the hillsides *Vicia canescens*, Boiss. This plant covers the slopes of these bleak hills with a light green verdure, which seems at a distance to indicate a fertile soil. In point of fact it grows in the shingle, through the interstices of which it sends its roots deep into the disintegrating surface of the rocks. We cooled our afternoon tea by burying the bottle to the neck in a snow-drift, and occupied the half-hour while it was been chilled in digging out the complicated stoloniferous roots of *Carex stenophylla*, Wald., which were entangled everywhere in the gravel. An hour through the valley brought us to the *Fim-el-Mizab*, which is a wedge-shaped opening between the hills. The valley descends from this opening at an angle of about 25° to a point just above the Cedars. We made our way for half-an-hour down this steep valley by a zigzag path, and at 4½ p.m. arrived at the Cedars. What was our surprise and pleasure to find there a tent, and three excellent ladies of the British Syrian Schools, who were spending a few days at the sacred grove. The barometer at 5½ p.m. read 24.26.

Our train, which had gone around the base of the mountain, did not reach the Cedars till after sunset. We occupied the time profitably in collecting the plants which grow in the grove: *Cedrus Libani*, Barr. *Ferulago frigida*, Boiss., var. *laxa*, Post (a variety with stem leaves higher up and lobes much longer and looser than in type), *Astragalus pinctorum*, Boiss., *Piptatherum holciforme*, M.B., *Berberis Cretica*, L., *Poa diversifolia*, Boiss. et Bal., var. *crassipes*, Hackel. In the evening we had

an hour's singing with the ladies, then a stroll among the solemn old trees before turning in to a well-earned rest.

Friday, August 8.—Before leaving the Cedars at 7 a.m. we took another observation of the barometer, 24.25. The mean of the two observations, corrected by mercurial, gives 6,432 feet as the height of the grove. My horse, although quite lame, was able to take me up the 'Ain Ata road to the top of the pass. The view from this point over the Beshherri amphitheatre is magnificent. To the right rise the two ranges of Makmel, with the broad valley between them. *Vis-à-vis* is the *Jurd Elodia*, a sharp ridge extending around the northern side of the amphitheatre. To the left the *Jurd Haşrûn*, enclosing it to the south. In the floor of the amphitheatre is the deep gorge of the Kadisha, flanked by villages and convents, clinging to the almost perpendicular rocks, and at the bottom the foaming torrent.

From the 'Ain Ata road we made our way along the crest of the *Jurd Haşrûn* to its western shoulder. Every step of the way unfolded a new phase of the grand panorama. The air was keen and cold, and we were glad from time to time to avail ourselves of a sunny valley among the peaks. We collected *Paracaryum myosotoides*, Boiss., *Geranium subcaulescens*, L'her., *Campanula cymbalaria*, Sibth. et Sm., *Pimpinella Tragium*, Vill., var. *depauperatum*, Boiss.

From the peak of *Jurd Haşrûn* we descended by a steep grade into the valley which leads to Yamûni, and followed this valley southward for a couple of hours. We then struck off to the right for an hour, climbing over a dividing ridge into the heart of the *Jurd Tannurîn*, one of the wildest and loneliest parts of Lebanon. We strayed about twenty minutes off our way in this wilderness, when we fortunately met a wood-chopper who guided us back again into the 'Aqûrah road. Our detour, however, gave us *Kochia monticola*, Boiss., *Galium jungermannioides*, Boiss., *Jani-pera eccelsa*, M.B., and *Trifolium modestum*, Boiss. Having regained the 'Aqûrah track we crossed another dividing ridge, plunged into a valley, and climbed to the edge of the *Jurd 'Aqûrah*. There we found another encampment of Arab cheesemakers. Pitching over the edge of the *Jurd* we found ourselves *vis-à-vis* with *Jebel Fughri*, a saw-toothed, exceedingly rugged range which lies between 'Aqûrah, and Dûma. Winding around the shoulder of *Jurd 'Aqûrah* we descended over 2,000 feet to the village of 'Aqûrah, at which we arrived at 8 p.m. We had had a hard day of it. My horse was so lame that he had to be led from 11 a.m. till we arrived at 'Aqûrah. I walked seven hours up and down the steep hills and over the rugged rocks.

Just as we began to descend from the edge of the *Jurd 'Aqûrah* we came upon a layer of trap-rock, 400 to 500 feet thick, which we followed almost to the village. We traced it on the 'Aqûrah side of the *Nahr Ibrahim* valley, on a level somewhat above the village, for a distance of three hours to the south-west. A similar layer flanks the *Afqa* side of the *Nahr Ibrahim* valley, at the same level, from a point a little beyond *Afqa* almost to *Neba'-el-Hadid*. This bed must have been ejected before

the valley was excavated. A seam in the limestone strata, five or six hundred feet above 'Aqûrah, would appear to be the place of eruption.

Saturday, August 2.—A farrier from the village removed the nail which had lamed my horse, so that he was able to go on with the party. I preferred, however, to walk from 'Aqûrah to Afqa. Just beyond 'Aqûrah is a natural bridge. The plunge down into the Afqa gorge is very fine.

While waiting for our caravan we took a dip into the icy water above the fall. We were as far as before from being able to solve the problem as to how the granite columns of Afqa were got there. The gorge of the Nahr Ibrahîm (Adonis) seems to have no trace of any road by which they could have been brought. We were as enchanted as ever with the emerald water, the grand old walnut trees, the great wall of rock, two thousand feet high, towering above the gorges and the ruins of the ancient temple of Venus, with the weird memories of its vanished worship.

We lunched under an almond tree half-way from Afqa to *Neba'-el-Iladid*. We sat on blocks of basalt, and, looking across the valley, saw clearly the layer of igneous rock, which must have once covered the area now hollowed out by the river. Two hours farther on we came to the beautiful ice-cold fountain of *Neba'-el-Iladid*. There we found *Galium jungermannioides*, Boiss., and *Cystopteris fragilis*, L.

Our course now diverged west from the road to *Neba'-el-'Asal*, between *Sunnîn* and *Jebel Qartabah*. Three-quarters of an hour above *Meirûbah* we visited the coal mine owned by the Khâzin family. It was worked a dozen years ago to supply coal to the 'Aintûrah school. The pits go obliquely into the side of the hill. The seams are all less than a yard in thickness. The product is similar to cannel coal, but far inferior owing to large earthy admixture, and the presence of considerable quantities of iron pyrites. It required a range of peculiar construction to burn the coal, but as the fuel was not found economical the mines have been abandoned. The same is true of the other Lebanon coal mines.

Just above *Meirûbah*, in the sandy soil, we found *Silene Reuteriana* Boiss., and *Agrostis alba*, L. On the moist mossy rocks we found *Drosera rotundifolia* L., *Osmunda regalis*, L., and *Adenocarpus divaricatus*, L'her, var. *Græcus*, Boiss.

Meirûbah, although so high, is so cosily nestled in a hollow between lofty hills that it is protected from the cold winds and exposed to warm sunshine. Our tent was on a truncated cone of sandstone, overlooking the valley and a part of the town. Our tent door was face to face with the giant form of *Sunnîn*, and the sites of *Neba'-el-'Asal* and *Neba'-el-Lebben* were in plain view.

Sunday, August 10.—We enjoyed a quiet Sunday before taking our last stage to *Beirût*.

Monday, August 11.—Rising at an early hour we took our course through the picturesque rocks of *Feitrûn*, *Reifûn*, and *'Ajeltûn*. From the latter village we began to see the wonderful panorama of the Antelias

and Beirût plains, with Beirût and the blue sea behind them. We followed the ridge down to 'Aintûrah, and then crossed into the Dog River Valley, and so over the ridge along the course of the waterworks tunnel to the Dubeiyyeh. After lunching at one of the cafés we rode into Beirût. I had walked all the way, five hours, from Meirûbah to the Dog River.

LIST OF PLANTS COLLECTED DURING THE JOURNEY.

N.B.—The plants new for this region are in *Italics*, and the new species in SMALL CAPITALS. They are all published in Fasc. II. *Plantes Postianæ*, Lausanne, Georges Bridel, Fevrier, 1891.

I.—RANUNCULACEÆ.

1. *Ranunculus demissus*, D. C. Alpine Hermon.
2. " *Schweinfurthii*, Boiss. Top of Jebel Barûk.
3. *Delphinium anthoroideum*, Boiss. Deir 'Aṭīyeh to Qaryetein.
4. " *flavum*, D. C. Desert near el-Beïḍa.
5. " *oliganthum*, Boiss. Deir 'Aṭīyeh to Qaryetein.
6. " *sp. near* " " " " "

II.—BERBERIDACEÆ.

7. *Berberis Cretica*, L. Alpine Lebanon.

III.—PAPAVERACEÆ.

8. *Papaver rhœas*, L. var. *Syriacum*, Boiss. Top of southern spur of Nusairy Mountains.
9. *Papaver Libanoticum*, Boiss. Top of Hermon.
10. *Glaucium Arabicum*, Fresen. Near Qaryetein.

IV.—CRUCIFERÆ.

11. *Mathiola Damascena*, Boiss. Between En-Nebk and Qaryetein.
12. *Barbarea minor*, C. Koch. Top of Jebel Barûk.
13. *Alyssum montanum*, L. " "
14. " *lepidotum*, Boiss. " "
15. " *argenteum*, Wittm. " " Jisr-el-Kuwwah.
16. " *alpestre*, L. var. *minutiflorum*, Boiss. Top of Hermon.
17. *Draba vesicaria*, Desv. Top of Hermon.
18. " *oxycarpa*, Boiss. " "
19. *Erysimum scabrum*, D. C. Subalpine Hermon.
20. " *goniocaulon*, Boiss. Top of Jebel Barûk.
21. " *purpureum*, Loisel. Var. *Blancheanum*, Post Marbaḥ-
'Antar.

22. *Thlaspi*, sp. Top of Jebel Barûk.
23. *Isatis glauca*, Auch. Ma'lûlah, Asâl-el-Ward.
24. *Sameraria Armena*, L. Between Palmyra and el-Weshen.

V.—CAPPARIDÆ.

25. *Capparis spinosa*, L. Jebel-Bil'âs.

VI.—RESEDACEÆ.

26. *Reseda Luteola*, L. Southern spurs of Nusairy Mountains.

VII.—FRANKENIACEÆ.

27. *Frankenia hirsuta*, L. Near Palmyra.

VIII.—SILENEÆ.

28. *Tunica pachygonu*, Fl. et M. Palmyra.
29. *DIANTHUS DESERTI*, Post. Mt. south of Qaryetein. The species was found by the author between Khan Hathrûrah and Jericho, and named var. *pruinosa* of *D. multipunctata*, Ser.
30. *Dianthus polycladus*, Boiss. 'Aîlah.
31. " " var. *diffusa*, Post. Top of Hermon and Jebel Barûk.
32. *Dianthus Haussknechtii*, Boiss. Top of Jebel Barûk.
33. *Gypsophila Rokejeka*, Del. Deir 'Atîyeh to Qaryetein.
34. " *ruscifolia*, Boiss. Peak above Bludân (Anti-Lebanon.)
35. " *HYGROPHILA*, Post. Ditch, Mar Liân (Qaryetein.)
36. " *hirsuta*, Boiss, var. *alpina*, Boiss. Zohr-el-Qodîb.
37. " *ANTILIBANOTICA*, Post. Mountain above Bludân.
38. *Ankyropetalum gypsophiloides*, Fenzl. Wadi Meisellân (Anti-Lebanon) Jebel Bil'âs.
39. *Silene Reuteriana*, Boiss. Meirûbah (Lebanon.)
40. " *odontopetala*, Fenzl. Zohr-abul-Hîn.
41. " " var. *rubella*, Post. Top of Hermon.
42. " *swertiaefolia*, Boiss. El-Weshen to Jebel Bil'âs.

IX.—ALSINEÆ.

43. *Alsine juniperina*, Fenzl. Top of Hermon.
44. " *rupestris*, Labill. Zohr-el-Qodîb.
45. " *Meyeri*, Boiss. Mountain above El-Weshen.
46. *Cerastium trigynum*, Boiss. Zohr-el-Qodîb.

X.—PARONYCHIEÆ.

47. *Herniaria glabra*, L. Nusairy Mountains.

XI.—TAMARISCINÆ.

48. *Reaumuria Billardieri*, J. et Sp. Syrian Desert. Deir 'Atīyeh to Qaryetein.

XII.—HYPERICACEÆ.

49. *Hypericum helianthemoides*, Boiss. Jebel Kenīseh.
50. „ *nanum* Poir. Rukhleh.

XIII.—MALVACEÆ.

51. *Alcea rufescens*, Boiss. Mountain south of Qaryetein.
52. „ *lavateræflora*, D. C. Between 'Aīhah and Rukhleh.
53. *Malva rotundifolia*, L. *var. perennans*, Post. Top of Hermon.

XIV.—LINÆÆ.

54. *Linum toxicum*, Boiss. Top of Hermon.

XV.—ZYGOPHYLLÆÆ.

55. *Fagonia Olivieri*, D. C. Plain south and west of Qaryetein.
56. *Zygophyllum fabago*, L. Qaryetein.
57. *Nitraria* sp. Qaryetein.

XVI.—GERANIACEÆ.

58. *Geranium subcaulescens*, L'Her. Jurd Haşrûn.
59. *Erodium trichomanefolium*, L'Her. Subalpine Hermon.

XVII.—RUTACEÆ.

60. *Haplophyllum fruticosum*, Labill. Meisellûn (Anti-Lebanon).

XVIII.—SAPINDACEÆ.

61. *Acer Monspensulanum*, L. Wadi Shib'ah (Hermon).

XIX.—ANACARDIACEÆ.

62. *Rhus Coriaria*, L. Rocks. Top of Jebel Barûk.

XX.—TEREBINTHACEÆ.

63. *Pistacia mutica*, F. et M. Mountains of Palmyrene desert.

XXI.—RHAMNACEÆ.

64. *Rhamnus Palestina*, Boiss. Mountains of Syrian desert.
65. „ *Libanotica*, Boiss. Top of Hermon.

XXII.—LEGUMINOSÆ.

66. *Adenocarpus divaricatus*, L'her. Meirûbah (Lebanon.)
67. *Lupinus pilosus*, L. Nusairy Mountains.
68. *Argyrolobium crotalarioides*, J. et Sp. Mountains south of Qaryetein.
69. *Genista Libanotica*, Boiss. Top of Hermon.
70. *Trifolium fragiferum*, Boiss. Mar Lian (Qaryetein.)
71. „ *modestum*, Boiss. Jurd-'Aqûrah. Zohr-el-Qodîb.
72. *Lotus corniculatus*, L. var. *alpinus*, Boiss. Top of Jebel Barûk.
73. „ *Gebelia*, Vent. var. *villosus*, Boiss. 'Aîhah (Hermon.)
74. *Astragalus hirsutissimus*, D. C. Top of Hermon. Zohr-el-Qodîb.
75. „ *lanatus*, Labill. Top of Hermon.
76. „ *emarginatus*, Labill. Top of Jebel Barûk.
77. „ *trichopterus*, Boiss. Top of Harf-Ram-el-Kebsh.
78. „ *pinetorum*, Boiss. Top of Jebel Barûk.
79. „ *gummifer*, L. Alpine Lebanon and Hermon.
80. „ *echinus*, D. C. Top of Hermon.
81. „ *cruentiflorus*, Boiss. Top of Hermon.
82. „ Sp. Jebel-esh-Shuqîf (Anti-Lebanon.)
83. „ *Bethlemiticus*, Boiss. 'Aîhah (Anti-Lebanon) Deir'Aîtyeh to Qaryetein.
84. „ *deinacanthus*, Boiss. Jebel Kenîseh.
85. „ *coluteoides*, Willd. Top of Jebel Barûk.
86. „ *elongatus*, Willd. Hills south of Qaryetein.
87. „ *trifoliolatus*, Boiss. Mountains south of Qaryetein.
88. „ *angustifolius*, Lam. Tops of Lebanon and Hermon.
89. „ *Hermoneus*, Boiss. Top of Hermon.
90. *Glycyrrhiza glabra*, L. Anti-Lebanon.
91. *Onobrychis Cadmea*, Boiss. Jebel Kenîseh.
92. „ *Ptolemaica*, Del. Hills south of Qaryetein.
93. *Alhagi Camelorum*, Fisch. Qaryetein.
94. *Vicia angustifolia*, Roth. Jebel Kenîseh.
95. *Pisum formosum*, Stev. Zohr-el-Qodîb.
96. *Prosopis Stephaniana*, Willd. Qaryetein.

XXIII.—ROSACEÆ.

97. *Cerasus prostrata*, Labill. Top of Jebel Kenîseh and Barûk. Top of Anti-Lebanon.
98. *Cerasus tortuosa*, Boiss. et Haussk. Mount above El-Weshen.
99. *Prunus ursina*, Ky. Thickets (Anti-Lebanon). Kenîseh.
100. *Rosa glutinosa*, Fl. Gr. Top of Jebel Barûk.
101. „ *canina*, L., var. *dumetorum*, Thuill. South end of Hermon.
102. *Potentilla geranioides*, Willd. Top of Hermon.
103. *Rubus casius-ulmifolius*, Focke. 'Ain-Shems (Nusairy Mountains).
104. *Pyrus Syriaca*, Boiss. Glen above Deir-el-'Ashâir.
105. *Cotoneaster nummularia*, F. et M. Jebel-Kenîseh. Zohr-âbul-Hin.

XXIV.—DROSERACEÆ.

106. *Drosera rotundifolia*, L. Meirûbah (Lebanon.)

XXV.—CRASSULACEÆ.

107. *Umbilicus Libanoticus*, Labill. Alpine and subalpine Lebanon.

XXVI.—UMBELLIFERÆ.

108. *Eryngium Heldreichii*, Boiss. Top of Hermon.
 109. *Hippomarathrum Boissieri*, Reut. et Haussk. Ma'lulah. 'Aîḥah.
 110. „ *crispum*, Pers. Below Qal'at el Ḥuṣṣ (Nusairy Mountains.)
 111. *Carum elegans*, Fenzl. Alpine Lebanon.
 112. *Bupleurum Libanoticum*, Boiss. et Bl. var. *OLIGACTIS*, Post. Ma'lulah.
 113. *Falcaria Rivini*, Host. Cœlesyria.
 114. *Pimpinella corymbosa*, Boiss. 'Aîḥah (Anti-Lebanon.)
 115. „ *Tragium*, Vill. Alpine Lebanon and Anti-Lebanon.
 116. *Prangos asperula*, Boiss. Jebel Kenîseh.
 117. *Fœniculum officinale*, L. Nusairy Mountains.
 118. *Ferula Blanchei*, Boiss. Palmyrene Desert.
 119. „ *Hermonis*, Boiss. Mountain of 'Ayûn-en-Nasûr.
 120. „ *BILASI*, Post. Jebel Bil'âs.
 121. „ *BARBEYI*, Post. Jebel Bil'âs.
 122. *Ferulago frigida*, Boiss. Alpine Hermon.
 123. „ „ var. *LAXA* Post. Cedars of Lebanon.
 124. *Peucedanum depauperatum*, Boiss, var. *alpinum*, Boiss. Top of Hermon.
 125. *Johrenia fungosa*, Boiss. Jebel Bil'âs.
 126. „ *juncea*, Boiss. South end of Nusairy Mountains.
 127. *Daucus pulcherrimus*, Willd. Yebrûd (Anti-Lebanon).
 128. *Caucalis leptophylla*, L. Jebel Kenîseh.
 129. *Turgenia latifolia*, Boiss. var. *brachyacantha*, Boiss. Jebel Kenîseh.

XXVII.—CAPRIFOLIACEÆ.

130. *Lonicera nummularifolia*, J. et Sp. Rukhleḥ.

XXVIII.—RUBIACEÆ.

131. *Crucianella ciliata*, Lam. Mountain above el-Weshen.
 132. *Asperula glomerata*, M. B. Top of Hermon.
 133. *Galium Orientale*, Boiss. Top of Jebel Barûk.
 134. „ *aureum*, Vis. 'Aîḥah. Cedars. El-Jebel-el-Abiad.
 135. „ *jungermannioides*, Boiss. Jurd 'Aqûrah. Neba'-el-Ḥadîd.
 136. *Rubia Olivieri*. A. Rich. Wadi Shib'ah.

XXIX.—DIPSACEÆ.

137. *Cephalaria stellipilis*, Boiss. 'Aîhah.

XXX.—COMPOSITE.

138. *Evax Anatolica*, Boiss. et Heldr. Top of Jebel Barûk.
 139. *PHAGNALON LINIFOLIUM*, Post. Qaldûn (Anti-Lebanon.)
 140. *HELICHRYSUM PYGMÆUM*, Post. Base of Harf-Râm-el-Kebsh.
 141. *Postia lanuginosa*, D. C. Mountains south of Qaryetein.
 142. *Achillæa odorata*, Koch. Jebel Barûk.
 143. „ *fragrantissima*, Forsk. Deir 'Aîyeh to Qaryetein, and eastward.
 144. *Pyrethrum densum*, Labill. Top of Hermon.
 145. „ *tenuilobum*, Boiss. Top of Jebel Barûk.
 146. *Anthemis* sp. „ „
 147. *Senecio doriaeformis*, D. C., var. *megalphron*, Boiss. Mountain above Bludân.
 148. *Acantholepis Orientalis*, Less. Qaryetein to Palmyra.
 149. *Gundelia Tournefortii*, L. Kenîseh.
 150. *Carlina corymbosa*, L., var. *Libanotica*, Boiss. Wadi Meisellûn. Jebel Kenîseh.
 151. *Gymnarrhena micrantha*, Desf. El-Jebâh to El-Beida.
 152. *COUSINIA WESHENI*, Post. Mountain above El-Weshen.
 153. „ *DAYI*, Post. 'Asâl-el-Ward.
 154. „ *Hermonis*, Boiss. Hermon.
 155. „ *Libanotica*, D. C. Jebel Kenîseh.
 156. „ *Pestalozzæ*, Boiss. Wadi Meisellûn.
 157. *Chamæpeuce Alpini*, J. et Sp. Jebel-Kenîseh.
 158. *Onopordon heteracanthum*, C. A. M. Wadi Meisellûn.
 159. *Jurinea Stæhelinæ*, D. C. Mountain above El-Weshen. Mountain above Blûdan.
 160. *Centaurea axillaris*, Willd. Top of Hermon.
 161. „ *Damascena*, Boiss. Khan Meisellûn.
 162. „ *Postii*, Boiss. Qaryetein.
 163. *Centaurea Balsamita*, Lam. Ma'lûlah.
 164. *CENTAUREA BALSAMITOIDES*, Post. Between Palmyra and Marbat-'Antar.
 165. *Centaurea onopordifolia*, Boiss. Between 'Aitanith and Jisr-el-Kuwwah.
 166. *PHLEOPAPPUS LONGISPINUS*, Post. 'Asâl-el-Ward.
 167. „ *Libanoticus*, Boiss. Alpine and subalpine Hermon.
 168. *Carthamus lanatus*, L. 'Aitanith to Jisr-el-Kuwwah.
 169. „ *glaucus*, M. B. var. *Syriacus*, Boiss. Jebel Barûk.
 170. „ *flavescens*, Willd. Between Palmyra and El-Weshen.
 171. *Chondrilla juncea*, L. Wadi Meisellûn.

172. *Crepis Robertioides*, Boiss. Top of Hermon.
 173. „ *Reuteriana*, Boiss. Var. *alpina*, Boiss. Top of Jebel Barûk.
 174. *Leontodon asperrimum*, Willd. Top of Jebel Barûk.
 175. *Tragopogon buphtalmoides*, Boiss., var. *humile*, Boiss. Top of Jebel Barûk.

XXXI.—CAMPANULACEÆ.

176. *Campanula Cymbalaria*, S. and S. Jurd Haşrûn.
 „ *stricta*, L. Top of Jebel Barûk.
 177. *Podanthum lanceolatum*, Labill. Top of Lebanon and Hermon.

XXXII.—PLUMBAGINACEÆ.

178. *Acantholimon Armenum*, Boiss. et Host. Mountain above Bludân.
 179. „ *Libanoticum*, Boiss. Hermon.
 180. *STATICE PALMYRENSIS*, Post. Salt Marshes, Palmyra.

XXXIII.—OLEACEÆ.

181. *Fraxinus oxyphylla*, M. B. Bludân to Ma'lûlah.

XXXIV.—APOCYNACEÆ.

182. *Vinea Libanotica*, Zucc. Top of Jebel Barûk and Kenîseh.

XXXV.—PRIMULACEÆ.

183. *Androsace multiscapa*, Duby. Zohr-el-Qodîb.

XXXVI.—BORRAGINACEÆ.

184. *Heliotropium Europæum*, L. Mountains south of Qaryetein.
 185. *Heliotropium villosum*, Willd. Barri.
 186. „ *Bovei* Boiss. Palmyra.
 187. *Paracaryum myosotoides*, Labill. Top of Hermon. Jurd Haşrûn.
 188. *Onosma cærulescens*, Boiss. Mountain above Bludân.
 189. *Alkanna Orientalis*, Boiss. Top of Hermon.

XXXVII.—CONVOLVULACEÆ.

190. *Convolvulus pilosellifolius*, Desr. Qaryetein.
 191. „ *Libanoticus*, Boiss. Top of Jebel Barûk.
 192. *Cuscuta planiflora*, Ten. 'Aîlah.

XXXVIII.—SOLANACEÆ.

193. *Hyoscyamus albus*, L. var. *desertorum*, Asch. El-Jebâh to el-Beîda.

XXXIX.—SCROPHULARIACEÆ.

194. *Verbascum simplex*, Labill. Hills above the Falls of the Barada.
195. „ *ptychophyllum*, Boiss. 'Aīḥah to Rukhleḥ.
196. „ *ANTARI*, Post. Near Marbat-'Antar.
197. „ *KARYETEINI*, Post. Mountains south of Qaryetein.
198. „ *sinuatum*, L. Aitanith to Jisr-el-Kuwwah. Nusairy Mountains.
199. *Verbascum Sinaïticum*, Benth. Meisellûn (Anti-Lebanon).
200. „ *Cedreti*, Boiss. Jebel 'Ain-en-Nusûr, above Bludân (Anti-Lebanon).
201. „ *Damascenum*, Boiss. Top of Hermon.
202. „ *PORTERI*, Post. Between 'Asâl-el-Ward and Ma'lulah.
203. *CELSIA GLANDULIFERA*, Post. Marbat-'Antar.
204. *Linaria Damascena*, Boiss. et Held. Jebel 'Ain-en-Nusûr.
205. *Scrophularia xanthoglossa*, Boiss. Near 'Aīḥah (Antilebanon).
206. „ „ *var. decipiens*, Boiss. ? Jebel Barûk.
207. „ „ *variegata*, M. B. Mountain south of Qaryetein.
208. „ „ *var. Libanotica*, Boiss. Subalpine Hermon.
209. *Veronica Orientalis*, Mill. Jebel Barûk.
210. *Bungea trifida*, Vahl. Hills south of Qaryetein.

XL.—OROBANCHACEÆ.

211. *Phelipea ramosa*, L. Palmyrene Desert.

XLI.—LABIATÆ.

212. *Micromeria mollis*, Bth. ? Mountain above el-Weshen. Qaryetein.
213. *Thymus Syriacus*, Boiss. Marbat-'Antar.
214. *Zizyphora clinopodoides*, M. B. *var. rigida*, Boiss. Mountain above Bludân.
215. *Zizyphora clinopodoides*, M. B. *var. canescens*, Boiss. Jebel Barûk.
216. *Salvia grandiflora*, Ettl. Juweikhât (Nusairy Mountains).
217. „ *verbascifolia*, Boiss. Jebel Kenîseh.
218. *Nepeta Cilicica*, Boiss. Qal'at-el-Bizzeh (Lebanon.)
219. „ *glomerata*, Montb. Top of Hermon.
220. *Sideritis Libanotica*, Labill. Top of Hermon.
221. *Sideritis Libanotica*, Labill., *var. incana*, Boiss. (?) Top of Nusairy chain above Fiddârah. Perhaps a new species.
222. *Sideritis Libanotica*, *var. linearis*, Benth. Near Meisellûn.
223. *Scutellaria fruticosa*, Desf. Jebel Barûk.
224. „ *utriculata*, Labill. Subalpine Hermon.
225. *Stachys Libanotica*, Boiss. Jebel Barûk.
226. *Eremostachys macrophylla*, Montb. et Auch. Mountains south of Qaryetein (*Mollucella lanata*, Post.)

227. *Phlomis rigida*, Labill. Jebel Barûk.
 228. „ *brevilabris*, Ehr. Jebel Barûk. Jebel Kenîseh.
 229. „ *Nissolii*, L. 'Aîhah.
 230. „ *chrysophylla*, Boiss. Subalpine Hermon.
 231. *Ballota saxatilis*, Sieb. Jebel Barûk.
 232. „ *ANTILIBANOTICA*, Post. Wadi-es-Şohrîji (Anti-Lebanon).
 233. *Teucrium Creticum*, L. El-Juweikhât (Nusairy Mountains).
 234. „ *Orientale*, L., var. *nivale*, Boiss. Top of Hermon.
 235. „ *pruinosa*, Boiss. Mountain above El-Weshen. Mountains south of Qaryetein.
 236. *Teucrium procerum*, Boiss. Nusairy Mountains.
 237. „ *Polium*, L. Mountains south of Qaryetein.
 238. *Ajuga Chia*, Poir. Mountains south of Qaryetein.

XLII.—PLANTAGINÆÆ.

239. *Plantago carinata*, Schrad. Harf-Râm-el-Kebsh.

XLIII.—SALSOLACEÆ.

240. *Blitum virgatum*, L. Zohr-el-Qodîb.
 241. *Atriplex Tataricum*, L., var. *virgatum*, Boiss. Qaryetein.
 242. *Atriplex roseum*, L. Palmyra to El-Weshen.
 243. „ *portulacoides*, L. Jebel Bil'âs.
 244. „ *leucocladum*, Boiss. Palmyrene Desert. Qaryetein. Desert.
 245. *Chenolea Arabica*, Boiss. Deir 'Aîyeh to Qaryetein.
 246. *Kochia*, sp. Desert from Qaryetein to Palmyra.
 247. „ *latifolia*, Fres. Deir 'Aîyeh to Qaryetein.
 248. „ *hyssopifolia*, Pall. ?? Deir 'Aîyeh to Qaryetein. Mountains east of Qaryetein.
 249. *Kochia monticola*, Boiss. Jurd 'Aqûrah.
 250. *Arthrocnemum glaucum*, Del. Everywhere in the desert. (Arabîcê *Ushnân*.)
 251. *Suaeda fruticosa*, L. Hammâm Abu-Rabâh. Qaryetein.
 252. *Salsola inermis*, Forth. Between Palmyra and el-Weshen.
 253. „ *crassa*, M. B. Between Deir 'Aîyeh and Qaryetein.
 254. „ *glaucæ*, M. B. General in deserts.
 255. „ *rigida*, Pall., var. *tenuifolia*, Boiss. General in deserts.
 256. „ *canescens*, Moq. Between el-Jebâh and el-Beîda.
 257. *Halochæris sulphurea*, Bge. Between el-Beîda and Palmyra.
 258. *Halimocnemis pilosa*, Moq. Between el-Beîda and Palmyra.

XLIV.—POLYGONACEÆ.

259. *Atraphaxis Billardieri*, J. et Sp. Qal'at-el-Bizzeh.
 260. „ *spinosa*, L. var. *rotundifolia*, Boiss. Near el-Weshen.
 261. *Oxyria digyna*, L. Zohr-el-Qodîb.

XLV.—Lauraceæ.

262. *Daphne oleoides*, L. Alpine Lebanon and Anti-Lebanon.

XLVI.—Euphorbiaceæ.

263. *Euphorbia chamaesyce*, L. Barri, at edge of Bil'âs.
 264. „ *lanata*, Sieb. Meisellûn.
 265. „ „ *var. microphylla*, Post. Barri.
 266. „ *erinacea*, Boiss. Alpine Hermon.
 267. „ *falcata*, L. Meisellûn Valley.
 268. „ *sp.* Near Hamath.
 269. „ *Chesneyi*, Kl. et Geke. Zohr-Abul-Hîn.
 270. „ *sp.* Palmyra.
 271. *Andrachne telephioides*, L., forma *rotundifolia*. Palmyra.
 272. *Crozophora verbascifolia*, Willd. *var. elata*, Post. Between el Beïda and Palmyra.

XLVII.—Urticaceæ.

273. *Parietaria Judaica*, L. Mountain above Bludân.

XLVIII.—Cupuliferæ.

274. *Quercus Lusitanica*, Lam. *var. latifolia*, Boiss. Near Qa'at el Hûsh.

XLIX.—Ephedraceæ.

275. *Ephedra alte*, C. A. M. Between el-Jebâh and el-Beïda.

L.—Coniferæ.

276. *Juniperus excelsa*, M. B. Zohr-Abul-Hîn.
 277. „ *foetidissima*, Willd. ?? Afqa.

LI.—Liliaceæ.

278. *Asphodelina Damascena*, Boiss. Top of Mountain above Bludân.
 279. „ *Taurica*, Pall. Harf-Râm-el-Kebsh.
 280. *Allium* sp. Mountain south of Qaryetein.
 281. „ *paniculatum*, L. ?? Top of Jebel Barûk.
 282. *Fritillaria*? sp. Top of Hermon.

LII.—Juncaceæ.

283. *Juncus pyramidatus*, Loh. Mar Lian, Qaryetein.

LIII.—CYPERACEÆ.

284. *Heleocharis palustris*, L. Jebel 'Ain-en-Nusûr.
 285. *Carex stenophylla*, Wahl., *var. planifolia*, Boiss. Zohr-el-Qodîb.

LIV.—GRAMINEÆ.

286. *Piptatherum holciforme*, M. B. Cedars.
 287. *Phleum pratense*, L., *var. nodosum*, Boiss. Top of Jebel Barûk.
 288. *Avena* sp. Marbat-'Antar.
 289. *Catabrosa aquatica*, L. Mountain above Bludân.
 290. " " *Var. chionophilus*, Post. By melting snow, Zohr-el-Qodîb.
 291. *Melica ciliata*, L., *var. Nebrodensis*, Boiss. Alpine Lebanon and Hermôn.
 292. *Dactylis glomerata*, L. Hermon.
 293. " " *var. Hispanica*, Boiss. Alpine Lebanon and Anti-Lebanon.
 294. " " *var. juncinella*, Boiss. Jebel 'Ayûn-en-Nusûr.
 295. *Stipa* sp. Mountain south of Qaryetein.
 296. *Agrostis alba*, L. Lebanon.
 297. *Poa diversifolia*, Boiss. et Bal., *var. crassipes*, Hack. Jebel Barûk.
 "Cedars."
 298. *Poa Sinaica* Steud. El-Beida to el-Jebâh.
 299. *Bromus variegatus*, M. B. Jebel Kenîseh. Cedars of Lebanon.
 300. " *brachystachys*, Horn. El-Jebâh to el-Beida.
 301. *Bromus Danthoniæ*, Fri. El-Jebâh to el-Beida.
 302. *Bromus* sp. El-Bil'âs.
 303. *Vulpia brevis*, Boiss. et Ky. Mountain above el-Weshen.
 304. *Hordeum spontaneum*, P. Koch. Near el-Weshen.
 305. *Agropyrum* sp. Mountain above Bludân.
 306. *Nephelochloa Persica*, Griseb. Jebel Barûk.
 307. *Ægilops ovata*, L. Wadi Shib'ah.

N.B.—Beside the above species collected many others were observed as indicated in the text.

SUMMARY OF BAROMETRICAL OBSERVATIONS, WITH ANNOTATIONS BY PROFESSOR ROBERT H. WEST, M.A.

		Date. 1890.	Barom. at level of sea.	Aerial Reading.	State Corrected.	Altitude.
1	West end of Jebel Kenisch	July 8th	29.71	23.60		6,600
2	Qal'at el-Buzah	"	29.70	23.70		6,450
3	Jebel Bârk.	July 9th	29.69	23.64		6,500
4	Ma'âsir	"	29.69	23.60		6,590
5	Jisr-el-Kuwwah	July 10th	29.73	27.33		2,400
6	Hasbeiyeh (top of village)	"	29.73	27.15		2,550
7	Shib'ah	July 12th	29.79	25.23		4,700
8	Mount Hermon	"	29.71	21.10		9,700
9	'Albah	July 14th	29.76	25.13		4,860
10	Rukhleh	"	29.75	24.80		5,550
11	Deir el-'Ashair	"	29.77	25.00		4,200
12	Peak at right of Bludan Valley	July 15th	29.75	22.00	25.62	7,865
13	" left	July 16th	29.70	22.48	22.62	7,900
14	Abul-Rin	"	29.70	22.30	22.53	7,900
15	Harf Kâmil-Kalsh	"	29.69	22.62	22.35	8,150
16	'Asil el-Ward	July 17th	29.66	24.67	22.67	7,725
17	Ma'lûla (convent)	"	29.65	25.00	24.72	5,200
18	Yalâd	"	29.65	25.80	25.05	4,800
19	Deir 'Afiyah	July 18th	29.67	26.30	25.85	4,600
20	Mahfn	"	29.68	27.30	25.75	4,000
21	Quryatein	"	29.69	27.80	26.75	2,950
22	" Mount south of Quryatein	July 22nd	29.59	27.90	27.25	2,450
23	Ghundûr	July 21st	29.65	25.80	27.35	2,385
24	Hamâm Abu Ribâh	July 22nd	29.57	27.70	25.25	4,600
25	Ul Jabah	"	29.57	27.55	27.15	2,450
26	'Abul-Bafla	"	29.57	24.00	27.00	2,600
27	Palmyra	July 23rd	29.60	28.54	27.45	1,150
28	South Peak, Jebel el-'Alâd	July 24th	29.64	28.72	27.99	1,600
29	Fountain of el-Weshen	July 25th	29.74	25.90	28.17	1,500
30	Conical peak at top of pass over Birâs	"	29.74	27.00	25.35	4,600
31	Dari	July 29th	29.71	26.90	26.45	3,375
32	Salamyah	July 30th	29.73	28.40	26.35	3,500
33	Hamah	July 31st	29.74	28.80	27.85	1,900
34	Qal'at-el-Musyâf	"	29.74	29.30	28.25	1,500
35	Mount west of el-Dîreh	August 2nd	29.78	28.62	28.75	900
36	El-Bireh	"	29.79	26.82	28.07	1,675
37	Mashita	"	29.79	27.60	26.27	3,585
38	Qal'at ul-Husn	August 4th	29.79	28.50	27.05	2,750
39	Sîr	August 6th	29.76	28.00	27.95	1,850
40	Zahr-el-Qadib	August 7th	29.67	27.33	27.45	2,325
41	" Cedars	"	29.70	21.33	26.78	2,950
	"	August 8th	29.71	24.26	20.78	10,210
	"	"	29.74	24.25	23.71	6,440
	"	"	"	"	23.70	6,425

NOTES.

Nos. 8, 9 and 10 give results which are evidently too high.

Nos. 11, 12.—The aneroid fell at Rukhleh, after the observation there. It was compared with a mercurial barometer at Bludân, on July 15, and these two observations corrected accordingly. I also re-adjusted the instrument.

Nos. 13-17 are corrected in accordance with the comparison after the readjustment.

Nos. 18-41.—There was manifestly some great change in the adjustment which affected all these readings. Taking the heights of Deir 'Atiyah (No. 19), and the Cedars (41), determined by mercurial barometer, as correct, I have applied throughout a constant correction—0.55 inch, which brings all the observations into fair accordance with previous determinations.

N.B.—In making the reductions from the observations in this series, I have made a rough allowance for temperature by *assuming* a temperature for the upper station. It need scarcely be added that these results cannot be considered as at all exact.

ANCIENT JERUSALEM.

Acra North, not South of the Temple.

By Major-General Sir CHARLES W. WILSON, K.C.B., F.R.S. &c., R.E.

IN the last *Quarterly Statement* the Rev. W. F. Birch has criticised some views on the topography of ancient Jerusalem which I ventured to put forward last summer; and has charged me with mistranslating Josephus.

I may at once say that, in my opinion, the *data* at present at our disposal are not sufficient to enable us to determine accurately some of the most important points in dispute. By comparing the historical materials with the local indications we can make guesses, more or less accurate, but, until the excavations made by Sir C. Warren are resumed, we cannot be certain. My guesses, the result of many years' study, unfortunately differ from the firm convictions of my critic, and I am sorry to say that, after reading his many admirable papers on the topography of Jerusalem, including the last, I am unable to accept all his conclusions.

To bring forward all the arguments for and against Mr. Birch's identifications would be to write a book, for which I have no leisure; and I can only notice here, and that briefly, some of his criticisms. In the first place, however, I must say a word for Josephus, in whom I am said to confide too readily. Josephus, whatever his faults may be, cer-

tainly knew what he was writing about when he described Jerusalem as it existed before the final siege. He had lived in the city for years; and though his descriptions of walls and buildings erected prior to the Herodian period may be wrong, they undoubtedly represent the traditions of his day. He wrote in a language not his own, and this has led, in some cases, to want of clearness; but when he makes a distinct topographical statement we cannot throw him over to suit our views without the clearest evidence that he is wrong.

Another point, Mr. Birch considers that "one may elucidate Josephus by the Bible, but not the Bible by Josephus." I maintain, on the contrary, that the only way to understand the topography of the Bible is to work backwards. If we could once reconstruct Jerusalem as Josephus saw it, there would not be much difficulty in restoring the Præ-Exilic city.

The principal points referred to by Mr. Birch are :—

(1.) The position of the Macedonian "stronghold," or "fortress," which Josephus calls sometimes the Acra and sometimes the Acropolis. The Acra was situated in the "Lower City," *i.e.*, on the eastern hill, upon a rocky height that was afterwards cut down and levelled (1 Macc. i, 33; Joseph. *Ant.* xii, 6, § 4; xiii, 9, § 7). It was in close proximity to and overlooked the Temple (1 Macc. iv, 41; xiii, 52; Joseph. *Ant.* xii, 5, § 4; 9, § 3; 10, § 5); and was within the limits of the "City of David" (1 Macc. i, 33; vii, 32; xiv, 36; *cp.* *Ant.* xii, 10, § 4). It was built or restored by Antiochus Epiphanes, and, until its destruction, it was regarded as the Citadel or Acropolis of Jerusalem. Now it may safely be asserted that no Greek engineer would have built an Acropolis on lower ground than the building it was intended to command and overawe. In Greek cities the Acropolis was almost invariably built on the highest and most defensible ground, and there is no reason to suppose that the engineers of Antiochus departed from the usual practice when they built the Acra on the eastern hill at Jerusalem. The site north of the Temple is so clearly indicated by the form of the ground that in any other ancient city it would never be questioned. As a further argument, it may be remarked that Aristæas, who visited Jerusalem before the Acra was built, describes a fortress which stood on a commanding eminence north of the Temple, and was fortified with towers to the summit of the hill, and constructed with enormous stones. (Quoted by Williams, *Holy City*, i, 73, 74.) It may be inferred, with some certainty, that what Antiochus did was to restore and, in part, rebuild this fortress.

Mr. Birch (*Quarterly Statement*, p. 74) gives certain points in favour of a southern site for Acra. To these it may be replied, (a)¹ that Josephus (*Ant.* xii, 5, § 4) says the Acra was in the "Lower city." (c) That portion of the ridge, on which the Acra stood, which was within range of the Temple, for the missiles of those days, was cut down and the danger removed. (d) It is geologically impossible for the ground south of the

¹ The letters (a), &c., are those of Mr. Birch's paragraphs.

Temple to have been higher than that upon which the Temple stood. (e) The argument that the Acra was lower than the Temple because in 1 Macc. vii. 32, 33, it is stated that Nicanor went "up to Mount Zion," is at first sight plausible. It must be remembered, however, that the writer is only using the usual *formula*; the expression "down to Mount Zion" is, as far as I am aware, never used in the Bible or Apocrypha. (f) The identification of the "third hill" of Josephus with the Temple hill requires the presence of a valley across Ophel which does not exist. (g) The quotation from Josephus is incorrect and incomplete, and has not the meaning attached to it. (h) It is not necessary to suppose that the threshing floor of Araunah was outside Jebus, or that the Acropolis was connected by walls with the lower city near Gihon. Possibly the Acropolis was first connected with the lower city of the Jebusites by David.

(2) The questions connected with the sites of Gihon and Enrogel are most difficult ones, and I am not prepared to accept the speculations in Mr. Birch's paper in *Quarterly Statement*, 1889, p. 46, as facts. There is only one known spring at Jerusalem, and, if Enrogel were a spring, as it is generally supposed to have been, it is a fair inference that Gihon and Enrogel were the same. The *Bir Eyûb* is not, and never could have been, a true spring; it is a deep well, and its only claim to be considered a spring is that, after four or five days' continuous rain, it overflows and runs down the valley. I may add that I do not take *gai*, and *emek* to be interchangeable, but I maintain that a valley may be an *emek*, "dale," near its head, and a *gai*, "ravine," at a lower portion of its course.

(3.) The next point is the charge of mistranslation:—

(a) My interpretation of the passage in *B. J.* ii, 19, § 4, is supported by Traill's translation. Cestius "proceeding to the upper town, encamped opposite the royal residence;" and it is considered correct by a Greek scholar to whom I referred the point. As Cestius was outside the first wall, it follows that Josephus must refer to that portion of the western hill to the north of the Jaffa Gate.

(b) The same scholar also considers that the way in which I take ἀμφίκυρτος, in the difficult passage in *B. J.* v, 4, § 1, is in accordance with the Greek. My view is that ἀμφίκυρτος refers to *plan*, and not, as Mr. Birch holds, to *section*; and that Josephus, in describing the principal topographical features of the ground on which Jerusalem stood, intended to draw a broad contrast between the western hill which was *high* and *straight*, and the eastern hill which was *low* and *curved*. I take ἀμφίκυρτος more particularly to refer to the eastern face of the eastern hill which is *convex*. If we are to insist on the exact meaning of the word, "curved on each side like the moon in its third quarter," I am afraid we must give up the question in despair, for no known topographical feature at Jerusalem has that form. This is one of those instances in which, knowing that Josephus wrote in a language not his own, I do not think we can insist on the full force of the Greek word.

February 28, 1893.

THE GARDEN TOMB.

I HAVE been requested by the lady to whom allusion was made in my letter to the "Times," of the 1st October last, to forward the accompanying note for publication in the *Quarterly Statement*.

I am glad to be able to take this opportunity of expressing my regret that I made a statement not strictly in accordance with the facts, though, at the time, I had every reason to believe that it was correct.

My object was to show how soon a suggestion, in favour of which there is no historic or traditional evidence, may become an accepted fact, when it refers to a "Holy Place" at Jerusalem.

C. W. W.

March 11, 1893.

A CORRECTION.

Three several times in the *Quarterly Statements* I have seen it noticed that the person who had the Gordon Tomb Chamber cleaned out some months ago *had passed the night there*. I, myself, was the person to have it cleaned, several others assisting—but no one passed the night there.

It was in the Church of the Resurrection that I passed the night on the Greek Festival of the Incarnation. While to do so in one place was feasible, to do so in the other was not so, and our poor homage reaches Him whose acts command it equally from every spot on earth.

M. E.

SINAI AND SYRIA BEFORE ABRAHAM.

By Major C. R. CONDER, D.C.L., R.E.

THE earliest notice of Palestine on monuments occurs in the inscriptions found, twelve years ago, by De Sarzek at Tell Loh, an important and very ancient city of Babylonia, standing on a mound 40 feet high, east of the great canal which joins the Tigris and the Euphrates (*Khat-ul-Hai*). The site includes an oblong palace in which is one of the *Ziggurat*, or stepped pyramids, of which Herodotus (i, 181) describes that erected at Babylon. The *Tell Loh* example has its stairs and sacred chamber, the use of which is also mentioned by Herodotus; and round this shrine the palace, with walls of burnt brick set in bitumen—still standing to a height of 10 feet—was raised, with a large central court and surrounding halls and rooms. Eight statues, not much smaller than life size, finely carved of Sinaitic granite, stood in the court; near the northern gate another colossal seated figure was found, and near the pyramid a small torso of yet earlier date. The place continued to be inhabited down to Greek times, and was finally destroyed by fire. The name of the city which

surrounded this palace was Zirgul, and it survives as *Zirghul*, at a place close by, to the present day.

The earliest known builder at this site was the prince called *Urbau* ("worshipper of the goddess *Bau*"), who is believed to have been the first ruler of all Babylonia, and who called himself King of "Sumer and Akkad," which may mean of Mesopotamia and Armenia, or of "the plains and mountains."¹ His exact date is not known, but has been roughly placed at 3000 to 2500 B.C. The Babylonian traditions of the time of Cyrus (as represented by the inscription of Nabonidus) carried back their history to 3800 B.C., but the King *Sargina* so noticed was a somewhat mythical person. The chronicles only go back to about 2300 B.C. (the time of the Cassite *Khammurabi*), and all that is at all clear is that *Urbau*, and his son *Dungi*, lived before that time, and, according to ordinary chronology, would have reigned even before Abraham's days.

The small granite torso, already mentioned, bears an Akkadian votive inscription of Urbau, which may be rendered thus:—

"To the Lord of the Pyramid,² the mighty power, together with the King of the Abyss, from *Urbau* prince³ of Zirgul, the son of the powerful God, the faithful witness of *Nin*, who has received power from the Lord of the Pyramid, and . . . rest from *Bau*, and receiving . . . from the Lord of the place. A man favoured by *Istar*, a beloved servant of the King of the place, beloved by Tammuz⁴ and I *Urbau*. Honouring the Pyramid Lord, my master, I rule (I hold the palm of glory?) full of honour, I am supreme master through the width of the land, satisfied with glory, the land resting. And the land being at rest, I have built the temple *Ninnu*,⁵ I have made the abode of the God who enlightens dark-

¹ Much has been written about these names. There is no doubt *Akkad* means "Mountain Country," and it is rendered in Assyrian by *Urtu* or Armenia. It was from Armenia that the Akkadians appear to have come south into Babylonia. *Sumer* has been compared with Shinar (*Sana'r* in Assyrian), perhaps the real derivation of both names, like that of the River Sangarius, and of the *Sangari* river in Mongolia, is from the Mongol *Soñg*, "to go" or "flow," and the meaning is "River Land." The *m* and *ng* are often interchanged in Akkadian. The earlier kings usually describe themselves only as ruling *Kieappi Akkad*, "The Land of Akkad." The later Assyrian scribes understood this to include *Sumir*. The latter region is distinctly noticed by Khammurabi, the Cassite conqueror of Babylon, about 2250 B.C.

² *Nin GIRSU* is in another text written *Nin ZUAT*, and appears to mean "Lord of the High Shrine." The emblem *SU* and the emblems *BA* and *ZU* are much alike, and represent a pyramid with or without steps, such as has been described, usually called a *Ziggurat*.

³ The word *Patesi*, which is equivalent to the Assyrian *rubu* and *sar* ("Chief" and "King") is also translated in that language *issakku*, and according to George Smith, means a viceroy.

⁴ *Dumzi*, the "Child Spirit," who is represented as a baby in the arms of *Istar*, was apparently the equivalent of the infant Adonis of Phœnicia, and is usually supposed to be the Tammuz of the Bible.

⁵ The sign *Ninnu* represents "fifty," but perhaps may only mean "Lordly" (from *nin*, "Lord.")

ness. To Mother Istar, Lady of the Mountain, a pyramid temple I have made, to *Bau*, the gracious Lady Child of God, I have made the temple of *Uruku* (Erech now *Warka*). To Istar—the most glorious lady—I have made the temple of *Ur*. I have made a pyramid to the God who is master of *Eridu* (or of the “Royal place”). I have made the temple of the God *Nindara*.¹ To the Gods (all of them ?) I have made a temple. To the gracious lady (creator of the earth ?) eldest child of *Nina*, I have made a temple standing by the sea, in faithful remembrance . . . the temple of the spirit of light I have made. I have made the pyramid temple to the Lord of the heavenly region. To Tammuz, Lord of the land of (darkness and the depths ?), I have built a pyramid temple.”

All the inscriptions found at *Tell Loh* are of this same character, devoting statues to the Gods, describing the building of temples and the piety of these ancient Akkadian rulers, and showing that the deities adored represented the Sun and Moon, the dawn and sunset, with the spirits of the mountains, the sea, the earth, and of hell.

The next reign was that of *Dungi*, son of *Urbau*, and on a small votive tablet found in these ruins is the following :—

“I, *Dungi*, King of the town of *Ur*, Lord of the land of Akkad, have made the temple *Ninnu*, the chosen abode of its Lord, the Lord of the Pyramid, the mighty power, together with the Lord of Hell.”

Contemporary with this King lived *Gudea*, a famous prince of Zirgula, of whom at least eight statues occur in the Tell Loh palace, which he built while restoring the pyramid temple. This is clearly shown by the short text, which says :—

“To his master, Lord of the Pyramid, with the Lord of Hell, from Gudea, ruler of Zirgula, created governor, by decree of *Nina*, for his master King Dungi, the mighty man, King of the land of Akkad, living in the home of the people of *Ur*.”

On one of the lintel stones of the palace is another text in which Gudea states that he “restored the temple *Ninnu* for the God who makes the darkness light.”

These shorter texts serve to explain the more lengthy inscription by Gudea, which is found on a seated statue (unfortunately headless) carved in dark green diorite, and found in the great court of the palace, which text is more valuable than the preceding, as containing passages of great interest both geographically, and as regards the civilisation of Western Asia at this early period. The text has been studied by M. Oppert and M. Amiaud, by Professor Hommel and by Mr. T. G. Pinches, and parts have been translated, while the general gist of the meaning is agreed to by all these scholars. Although the translation here given differs in some passages from those previously published, such differences do not occur in the geographical passages. The Akkadian syntax appears to me to invalidate some of the proposed renderings, since the genitive should

¹ *Nindara* seems to mean “Lord of the Deer,” and one of the Assyrian deities bears a deer, which also accompanies a Lydian deity. He appears to have been Merodach, or Ea.

never follow the nominative unless with a suffix, and since the object should always precede the subject. The language also appears to me to have had the same cases to the noun found in Dusratta's language, and in modern Turkish, as below¹ :—

	Akkadian.	Hittite.	Turkish.	Meaning.
1. Nom. Def. ..	-bi	-pi	-bu	"the"
2. „ Indef. ..	-s	-s	...	"a"
3. Genitive ..	-na	-na	-n	"of"
4. Dative ..	-a	-a	-a	"to"
5. Locative ..	-la	-la	-da	"at"
6. Accusative ..	-e	-e	-i	Accus.
7. Ablative ..	...	-dan	-den	"by"
8. Instrumental	-li	-li	-li	"by means of"
9. Causative ..	-cu	-kku	-ichun	"for"
10. Comitative ..	-lal	-allan	-ailan	"with"

Gudea's statue just noticed represents him holding on his lap the plan of his palace. The text covers the back and skirts of the figure and the throne on which he sits.

(1) "The statue of Gudea, prince of Zirgûl, the man who built the temple *Ninnu*, in the temple of his master the God who is Lord of the Pyramid. A measure of drink, a measure of food, half a measure of (stamped silver ?), half a measure of (bronze ?), the prince has offered, in fulfilment of the vow,² fulfilling the command of the Pyramid Lord as he spoke. Let him (raise his voice ?). Let him write his utterance."

(2) "To the Pyramid Lord, the great power, together with the Lord of Hell, this famous Gudea, ruler of Zirgûl—the faithful shepherd—has testified. Favoured with prosperity by the Pyramid Lord, having been given power by *Nina*, a man blessed with favour by *Nindara*, a son of *Bau*, having obtained mighty princelhood from *Madagad* : he invokes the glory of the Godhead."

(3) "Appointed great good fortune all his life, through the great mercy of God having become a (chief ruler ?) Gudea, shepherd of the life of the people of this land, has testified to his God, the Lord of protection, what time the favour of the Pyramid Lord has been shown towards his city, causing the heart of man to rest through his goodness, my city being full of silver. The protection which I cause all the people have testified. A man fulfilling his word, (4) a man who supports the weak, he has become (5) in city and land. Not raising disturbance, exceeding strong I have made the place. The temple of the Pyramid Lord, like *Eridu*,⁴ makes it a

¹ These, with exception of dative, accusative, and the nominative indefinite, were all recognised by Lenormant.

² *Sagba*, the Assyrian *mamitu* "juramentum," signifies a vow or votive offering, literally, a "great gift."

³ *Ma-dugud*, "Home Blessor," appears to be Istar, as goddess of children.

⁴ *Eridu*, written by the signs *NUNKI*, may mean, as Mr. Pinches points out, the "Capital," or "Chief's Place."

holy place. Generous to the (lowly ?), generous to the weak, there is not one among the sons of woman who is not a servant of the prince of this place. The most violent is made an obedient lamb. My beneficent rule establishes increase of (wealth ?)."

(5) "The stronghold of the city fails not, there is no weak place. It abides in strength, there is no . . . No lamentation arises there, no lamentation of mother or of household is uttered. No man rebelling against the City of Zirkul, seizing the place, enters through enmity. The usurer does not (?) the house of any man. I have become guardian for the pyramid God its master. The temple *Ninnu* of the God who enlightens the darkness I have made. I have made his abode, the beloved chief city of his (faith ?). Of costly (or cedar) wood I made it for him. What time I made the temple of the Lord of the Pyramid, beloved of the King, I have possessed authority from the upper sea to the lower sea.¹ I have raised it 25 cubits in height, with wood from the land of Lebanon,² wood of . . . cubits, wood of 50 cubits, brought from the mountain; rounding (round ?) beams. I made 1,007 pounds of bronze, and covering plates beaten (round ?) I made as a covering. I made the wood of the great gate, I covered it with silver. I made it for the *Ninnu* temple. The high place being overthrown to earth, I caused the restoration of its structure. From the city *Ura* (a wood yielding region ?) of *Zabala* wood *udur* wood very much, of *tulupu* wood, very high up I raised it."

(6) "Great pillars I made. I used gold dust for the pillars brought from the region of Mount *Khakhum*. I made the (approach ?) of the temple, with gold dust brought from the region of Upper Egypt.³ Brought (green ?) from the region of *Gubin*⁴—the mountain where wood is cut, the cut wood thence brought I made to be fashioned into beams. From the Medic mountain by the river of Gomer⁵ (bitumen ?) being brought, I made thereof the foundation of the temple *Ninnu*. I caused

¹ *Aabba Sinimta Aabba Siggacu*.—The name of *Si-nim* generally applies to the Highland of Persia (the Sinim of the Bible is also rendered "Persia" by the LXX Isaiah xlix, 12). The Persian Gulf may be intended. The *Sigga* Sea may perhaps mean "Sea of the Sunset" or "Sinking (of the Sun)," that is the Mediterranean.

² *Amalum* is supposed by Mr. Pinches to be the Amanus, or Northern Lebanon.

³ *Melukha* here, as in the Tell Amarna letters, stands for Meroe in Upper Egypt, according to Dr. Oppert; and it was from the south that the Egyptians obtained their gold. Assurbanipal appears to make *Makan* and *Melukha* equivalent to Egypt and Cush (or Ethiopia). Esarhaddon also mentions *Melukha* with Egypt.

⁴ *Gubin*, which occurs again as *Gubi* on another statue, appears to be the Chub of the Bible (Ezekiel xxx, 5), namely, *Coben*, in Ethiopia, or *Kuban*, near Dakkeh, where Rameses II obtained gold in Ethiopia.

⁵ *Madga*, an adjective from *Mada*; the *Madai* of the Assyrian monuments are the Medes. *Gumru*, or Gomer (Gen. x, 3) was the Cimmerian region near the Caucasus.

a ship to carry stone from the (inland ?) mountain of Borsippa¹ (7) for the structure of the temple *Ninnu*. From the Samalli of the Minyan mountain² I had very strong stone brought and from the Phœnician mountain³ Musalla for the building. I made the (court ?) of the temple *Ninnu* thereof : from the Phœnician mountain of Syria⁴ I had slabs of alabaster (or marble) made. I sunk it for the bolts of the temple. Of the land of the Syrian pass,⁵ the mountain of (silver ?), I dug the copper. I made indestructible pillars thereof. I used strong wood brought from the land of Upper Egypt, brought from the fortress of Zoan."⁶

"So doing I raised a loan (to secure which ?) I caused a loan of the offering of the seventh day. The handmaid and the lady were alike to me, the (possessions ?) of slave and master I took (I having decided that the gift should belong to the palace of the city ?) By building this temple, by the restoration of the worship, the service of *Nina*, and of the Lord of the Pyramid, is visibly established. There was nothing that a man had that he did not furnish me, or gift one here had that he did not make. The daughter gave the gift of a family that had no son. The dedication of this statue preserves the record. I caused the ruin of the foundation of the temple of *Ninnu* to be restored. In memory of the subjection of the city of the land of Elam⁷ I dedicated to the Pyramid Lord, to the temple of *Ninna*, the spoil. I, Gudea, prince of Zirkul, what time I built the temple of *Ninnu* to the Lord of the Pyramid, raised this structure, thus completing the temple."

(8) "As no prince had done for the Lord of the Pyramid I did. My name has been made great ; named as a governor, prospered in life by the Lord of the Pyramid. Stone being brought from the land of *Magana*⁸

¹ *Barsip* or Borsippa was near Babylon, believed to be represented by the *Birs Nimrud*.

² *Samalum* compares with the Samalli of later Assyrian texts, of whose king, Panammu (about 750-720 B.C.), an Aramaic inscription has been found at Merash under the Taurus. This agrees with rendering *Menua* as "Minyan," since the Minyan country was immediately above, in the Taurus, extending east towards Lake Van.

³ *Musalla* of the *Akharru*, or Phœnicians, might be read *Naksalla*.

⁴ *Tidalum* of the *Akharru* is compared with *Tidnu*, a name of Syria, by Professor Hommel. As regards the material, both alabaster and marble are found in the Tell Loh ruins. *Zakur* means "shining stone."

⁵ *Kagalad*, "top of the pass," according to Mr. Pinches, is translated in Assyrian *Babu Khurru*, perhaps "Phœnician Gate," recalling the Pylæ Syriæ, or pass above Antioch. This is close to the silver and copper-producing regions of Asia Minor.

⁶ *Kir Zanum*, "fortress of Zan" or Zoan, now *San* in Egypt.

⁷ *Anzan* was the Persian Kingdom of Cyrus.

⁸ *Magana* is a region always closely connected with Egypt, and which was famous for copper. The granite (diorite) was brought thence for the statues which are now in the Louvre, and is said to be Sinaitic granite. Copper was being worked in Sinai by the Twelfth Dynasty about this time, and it is clear

I made the image therewith. That my name may be remembered I proclaim this for me. I give the statue of Gudea, the statue of me as king, a voice and it says, 'To-day he has completed the temple of *Ninnu*—the temple of his beloved abode.' Before him who knows not, in future time to many generations, men shall speak of the prince, of the temple of *Ninnu*, of the Lord of the Pyramid my master, celebrating the fame. Gudea the prince of Zirgul says, that no man shall change what is said, putting forth his hand to that which is completed. The man who puts forth his hand to change what is completed, on my account God—the God Lord of Hell, the Lady of the Mountain, the lord of the place of the Borsippa temple,¹ will not deliver."

"An image for the service of the Lord of the Pyramid, and for declaring *Nina* mistress, not yielding silver, or onyx, or copper, or tin, or bronze, no man will cause to be given as spoil; being of strong stone let it remain in the place thereof. The violator, the man who takes away from the temple of *Ninnu*, and from the land, the portrait statue of Gudea—the man sitting in presence of the Lord of the Pyramid—the image of Gudea."

(9) "Prince of Zirgul, who built the temple *Ninnu*, the man who removes the writing that my hand has caused to be cut, to make it a possession, that man my God shall reject. Both his God, and my master the Lord of the Pyramid, shall do judgment, removing both him and the abode of his people, when he puts forth his hand to injure what I have written above, my name and what I have done. For me it shall be fulfilled, I having made the (court?) of my master the Lord of the Pyramid—a house for his possession. May the Lord of Dawn²—a mighty master—and *Madugud*³ bright mother of Zirgul and *Bau* eldest princess daughter of God and Istar the Lady of Battle and the Sun God—blessed Lord—and Nebo⁴ God of the people of the North—a glorious God, a very faithful God—and *Marki*⁵ eldest child of *Nina*,⁶ and Tammuz Abzu Lord

that Magan was the Sinaitic peninsula. The word means "ship enclosure" or "port," and this no doubt referred to a port on the Red Sea, probably at Suez, or at the old head of the sea near Ismailia, where an arm of the Nile was then debouching into the Red Sea. Thence the stone must have been taken by ship round Arabia, by Aden, and up the Persian Gulf and the Euphrates. If the great canal *Khat el Hai* was already made, the granite could be brought by water within a few miles of Tell Loh. Not much later *Khammurabi* records his having re-made one of the Euphrates canals.

¹ *Ezida*, "House of Support," was the name of a very celebrated temple at Borsippa.

² *Nin gun*. In Akkadian, *gun* is the "red" of dawn.

³ *Madugud* is mother of Zirgul here as is Istar in the text of another statue. "The Home Blessor" was probably a title.

⁴ *Pasak*, "very high," was apparently identified later with the Assyrian Nebo, derived from *Neb*, "high."

⁵ *Marki*, perhaps "earth creating" or "earth abiding."

⁶ The sign for *Nina*, used afterwards for Nineveh, represents a house with

of the land of (death?), and my God the Lady of Support, write against him an adverse fate. May the warrior slay in his days. May the power of the multitude rise as a whirlwind. Sitting in bondage—the man who does so to me—may he sit in the dust. May he go forth hearing the rejection of his honoured name. May his name be smitten by the Gods, the Gods overwhelming his abode. May the wind of God sweep blinding his eyes; may it make the waters sink into the earth. A bad name, springing from his name, may the child born to him become. A man regarded as the foe of man, may his dwelling grow dark of the light of God's glory. May Istar and the Lord of the Pyramid, bringing this to pass, make the people to acknowledge their power."

From the above it is clear that the heavy granite of Sinai was brought to this far off city in order that the statues might be too heavy, and not sufficiently valuable as spoil, to make their removal probable, and Gudea was chiefly afraid that some later personage might alter his often repeated name, as Rameses II afterwards put his name on the statues of other kings, laying claim to their deeds and victories; or as El Mamûn forged his name on the inscription recording Abd el Melek's building of the Dome of the Rock (leaving the date to attest his villainy). The statues were, however, preserved to later times, and the language in which they were written was forgotten a thousand years later, until its knowledge was revived by the determination of Assurbanipal to collect and translate into Assyrian "the ancient records of the heroes of Asshur and Akkad."

The insight into the geography, civilisation, and religion of the age is of great interest, showing that the Akkadians were in trading communication with Armenia and Media on the north, with Syria and the Taurus on the north-west—a region where, probably quite as early, and certainly a thousand years later, the Hittites, of the same stock, were speaking almost the same language—and with Sinai, Egypt, and Nubia on the south-west. All the precious metals (gold, silver, tin, copper, and bronze) and precious stones (onyx, alabaster, marble, and granite) were known, with various kinds of woods; mining was practised; ships traded by the Red Sea; and splendid temples and palaces were erected. Statues were carved, and writing was not confined to clay, but also executed in granite, the characters being, in many cases, the same in sound and meaning found on the Hittite texts, in a cognate system, and the arrangement of syllables of the word, one above another in the line, being exactly the Hittite arrangement. The heads of statues found in the ruins present the round skull, the high cheekbones, the hairless face of a Mongol people, whose language was closely connected with the Turkic, Mongol, and Tartar dialects, still surviving in Central Asia. The type is very similar to that of the *Men* or Hyksos kings of Egypt; and the *Men* or Minyans, who came from the north (from Armenia) we now know to have spoken, about 1500 B.C., a language akin to that of Hittites and Akkadians.

a fish in it. It has been rendered "fishing place," but perhaps *An Nina* means "Goddess of the fish-stream." (*Ab* "water," and *Kha* "fish.")

All this Mongol civilisation existed, and gave peace to Chaldea, long before any Semitic civilisation arose, and while the family of Abraham at Ur, the capital of Dungi, were shepherds wandering along the Euphrates to Northern Harran; nor was it entirely destroyed until the fall of Carchemish about 700 B.C., though the Media tribes of Lake Van from the north, and the Semitic powers on the east and south, were then threatening the last Mongol chieftains in Northern Syria, the power of the Kings of Akkad having long since passed away.

The inscriptions on the other statues are of less interest. Each statue was dedicated to a different God, and the character of the texts shows us what we might naturally expect to be the subject of the equally ancient Hittite monuments.

On another seated statue of dark blue diorite occurs the following text. The statue has a tablet on its lap, with a rule and with a writing stylus enclosed in a case :—

“The gift of Gudea, prince of Zirgula, servant of *Madugud*, a man beloved, to the goddess *Madugud*, mother of Zirgula. I having become a ruler, and having made the temple of *Nintu*, of the God who is Lord of the Pyramid, who enlightens the darkness, having laid the foundation of the (lofty ?) temple of *Madugud*, the lady who abides at the beloved temple of the land of Akkad, have made this for the temple of *Madugud*, its lady, and have devoted the image here before you. Gudea, prince of Zirgula, hoping to be heard, a servant worshipping the lady in the shrine of protection, the goddess whom the shrine of the glorious region of Ur holds, has here raised the holy place of her people. The foundation of my glorious power having become strong in the East, north of the shrine that rises in the land of *Uruk* (Warka or Erech) I have built a temple. I have so done being a servant of her great ladyhood. I have made the glorious inscription. Established with a lofty wall the upper enclosure stands. An abode of protection, to cause repose to my life, the strong dwelling stands: a fortified height, to cause (?) to my life it stands serving: a fortified (?) all my life causing, it stands serving. Walling in people who are staunch servants here abiding, the (?) foundation stands.”

This appears to refer to the building of the fortress enclosing the shrine. On another standing statue of green diorite is a similar dedication to Istar :—

“To the Lady of the Mountain, protecting the city, the mother of its sons, I Gudea, prince of Zirgula, have built the temple of the pyramid city. I have made the glorious inscription. I have done it, being a servant of the might of her great ladyhood. I have devoted it to the high place. I got stone from the region of Sinai. To the heavenly lady *Nintu*,¹ to mother Istar, I Gudea, the man who made it, proclaiming her long preservation of me, have devoted it to her temple.”

¹ *Nintu*, “Lady of the Sunset,” seems to answer to Istar, as Hathor to Isis, being another aspect of the same deity.

The inscription on the colossal statue in the rear of the Northern Gate is as follows :—

"To the Lord of the Pyramid his master, together with the Lord of Hell (the lower world), I Gudea, prince of Zirgula, famous through the breadth of the land, faithfully serving him together with the Lord of Hell, have testified to the Lord of the Pyramid, a great server of the house of God, a man enjoying favour, become a son of *Bau*, established in life by *Madugud*, by the princeliness of all the Gods. Enjoying wide fortune by the great mercy of God, I have become the guardian of the weak of this beloved city. I have built the temple *Ninnu*, for the God who enlightens the darkness, his beloved abode of faith. With planks of cedar wood I have made it. A great temple, a temple of (divination ?) I have made it. To make *Bau* (?) of heart I have made it, to become the establishment of its mistress. I have made the foundation of a house² her beloved abode rising nobly. I have set the beautiful foundation of the gate house. I have carved the face of a man no small (?) founder. Having here ruled the chief fortress of the king's house. I founded the temple of *Bau* the gracious lady, the child of heaven, lady of the temple of *Uraku* (Erech). Through the power of *Nina* and of the Lord of the Pyramid, I, Gudea, having received a sceptre, for the Lord of the Pyramid have raised tribute of the land of Sinai (*Magan*) and of the land of Upper Egypt (*Melukha*) of the land of Chub (*Gubi* or Ethiopia), land belonging to the country of Zoan (*Zal*).³ I sent to Zirgula a ship bearing wood. I got strong stone for the statue brought from the land of Sinai. I, Gudea, honouring the king's power, not raising hostility, the man who made the temple of the Lord of the Pyramid, proclaim this for me to establish my fame. I have made it for the temple of *Ninnu*."

The reference to the establishment of his power in the East perhaps alludes to the victory over Elam, noticed in the former text. Probably the temple included shrines of *Istar*, *Madugud* and *Bau* as well as of the sun, to each of whom statues were dedicated. The doubtful sign, if rendered *ma*, would give the meaning "no small ship builder."

The various countries and towns noticed in these texts are therefore apparently—

<i>Akkad</i>	....	....	"The mountains" (probably Armenia).
<i>Amalum</i>	....	....	Amanus, the northern Lebanon.

¹ *Uba* might mean "abode," but is probably the Akkadian *ubi* for divination or sorcery, which appears to give the true explanation of the word *ob* used in Hebrew for magicians (1 Sam. xxviii, 7, &c.), for which no real explanation is afforded by that language. It is explained in Assyrian as *abatu*, "charm." It still survives in the Turkic *bayu*, Chinese *pu*, Hungarian *bai*, "charm."

² *Gurte* might be rendered "what is founded." It seems to mean some sort of building—compare the Mongol *jort*.

³ There was a place called *Zal* on the Egyptian frontiers, usually supposed to be the same as Zoan.

<i>Anzan</i>	....	....	Elam or Persia.
<i>Barsib</i>	....	....	Borsippa, near Babylon.
<i>Eridu ?</i>	....	....	Perhaps only the capital or "good city."
<i>Gubin</i>	....	....	Chub or Ethiopia.
<i>Gumru</i>	....	....	A river apparently in Media.
<i>Khakhum</i>	....	....	A mountain.
<i>Kagalad</i>	....	....	"The top of the pass" in Syria.
<i>Madga</i>	....	....	Media, the "Mada-ic land."
<i>Magan</i>	....	....	Sinai.
<i>Martu</i>	....	....	"The sunset direction," Syria.
<i>Menua</i>	....	....	Minyan country, Armenia.
<i>Melukha</i>	....	....	Upper Egypt, Meroe.
<i>Musalla ?</i>	....	....	A Syrian region.
<i>Samalum</i>	....	....	The Samalli or "northern people" near Merâsh in North Syria.
<i>Tidalum</i>	....	....	Tidnu or Canaan.
<i>Ur</i>	....	....	Ur, supposed to be Mugheir in Chaldea.
<i>Uruku</i>	....	....	Erech or Warka in Chaldea.
<i>Urzu</i>	....	....	A town.
<i>Zal</i>	....	....	Zal, supposed to be Zoan.
<i>Zanum</i>	....	....	Zoan, now <i>Sân</i> .
<i>Zirgul</i>	....	....	Zirghul, close to Tell Loh.

This list of 23 countries and towns between Persia and the Mediterranean, and from Armenia and the Taurus on the north to Ethiopia on the south, represents the whole civilised world of Gudea's age.

As regards the deities adored, they evidently include heaven, hell, the ocean, the sun and moon, the dawn and the sunset; many of the names are either descriptive titles or are local names for deities of famous shrines. The Akkadians and Babylonians believed in pairs of deities, inhabiting the various kingdoms of the gods, such as *Ana* and *Baa* in heaven, *Enge* and *Ninki* in hell, *Ea* and perhaps *Nina* ("Lady of the Fish!") in the ocean, *Sin* and *Istar*, god and goddess of the moon. The "Child Spirit," Tammuz, answered to the Egyptian Horus—the new-born sun, who had travelled through Hades by night. Istar is called "Lady of Battle," "Lady of the Silver Bow" (the crescent moon), "Lady of the Mountain," and, according to one rendering, "Lady of the Tree of Life." The "Home Blessor" (*Madalagad*) was perhaps also one of her titles. The philosophy of the age regarded the heavens and the ocean as more ancient than the earth, and the "Earth Creator" as a child of heaven.

The claims of Gudea to fame, as a guardian of the weak and a pious worshipper, accord with other Akkadian texts of later times, and with the very ancient maxims of Egyptian papyri. All these various indications prove that, in and before the date assigned to Abraham in the Old Testament, a widespread civilisation existed throughout Western Asia as well as in Egypt.

Southampton, 30th January, 1893.

DOMETILLA.

M. DE SAULCY discovered in the cave under the Church of the Ascension on Olivet an inscription which reads as follows :—

ΘΑΡΣΙ ΔΟ
ΜΕΤΙΛΑ
ΟΥΔΙΣ ΑΘΑΝ
ΑΤΟC

That is to say :—*θάρα(ς)ι Δομετι(λ)λα ουδ' ἐς ἀθάνατος.* "Courage, Dometilla, none is immortal."

This sentiment is not unusual in early Syrian texts. We have, for instance, a text in Bashan (2032 Waddington), "Courage, Helen, dear child. Alas, none is immortal ;" and another, "Courage, my child, none is immortal." (2193 Waddington.)

As regards the Dometilla in question (buried in the cave of the traditional St. Pelagia, who as Père Lievin ["Guide," p. 163] informs us was an actress of Antioch converted in the fifth century, A.D.), I have not found any suggestion in Waddington or in De Vogüé as to who she was. Jerome ("Pilgrimage of Paula III") speaks of a Flavia Dometilla who was a Christian lady in the time of Domitian living in Ponza, near Ischia, and we might almost think from his words (p. 3, Pal. Pilgrim Text Society, trans.) that Dometilla had visited Jerusalem. If this identification be admitted the text would date about 95 A.D., and would be one of the earliest known Christian texts.

C. R. C.

NOTES ON THE "QUARTERLY STATEMENT."

P. 2. Mrs. C. Worsley has, perhaps, not taken into account that one of the known peculiarities of the Druze religion is that they represent themselves as may best accord with the views of those with whom they are in contact. They are indeed told to do so in their sacred books.

P. 33. Dr. Sayce does not appear to be aware of the reasons which lead to the supposition that *Debir* stood at the present village *Dhakariyeh*. Having lived there for some time, I fear that excavation would be difficult, because the old site appears to be under the modern village.

P. 29. Dr. Sayce also attributes the identification of Lachish to Dr. Flinders Petrie, in error, as the site was fixed many years before, and the only new confirmation has been the valuable discovery by Mr. F. J. Bliss of the cuneiform tablet. I do not feel convinced that Kirjath-Sepher of necessity meant "book town." It might merely mean town of "numbering."

P. 84. In two letters in the "Times" following the one republished

in the *Quarterly Statement*, I gave more detailed reasons for denying that the "Garden Tomb" could have been the Holy Sepulchre. It seems to be overlooked that the Deacon inscription refers very plainly to the Church of Constantine as then existing, "The Marturion of the Anastasis."

I am obliged to my friends for burying me so early at Jerusalem, but personally much dislike the giving of modern names to ancient sites, such as "Conder's Tomb."

When Canon Tristram says that he is not aware of any ninth century tomb at Jerusalem, he must, for the moment, have forgotten the inscribed tomb of the Princess Thecla Augusta, to which I referred in my first letter, and which I have described in "Syrian Stone Lore."

C. R. CONDER.

LECTURERS.

The authorised lecturers for the Society are—

The Rev. Thomas Harrison, F.R.G.S., Hillside, Benenden, Staplehurst, Kent. His subjects are as follows:—

- (1) *Research and Discovery in the Holy Land.*
- (2) *In the Track of the Israelites from Egypt to Canaan.*
- (3) *Bible Scenes in the Light of Modern Science.*
- (4) *Eastern Palestine.*
- (5) *The Dead Sea and the Cities of the Plain.*

The Rev. J. Llewelyn Thomas, M.A., Briton Ferry, Glamorganshire, South Wales. His subjects are as follows:—

- (1) *Explorations in Judea.*
- (2) *Research and Discovery in Samaria and Galilee.*
- (3) *In Bible Lands; a Narrative of Personal Experiences.*
- (4) *The Reconstruction of Jerusalem.*
- (5) *Problems of Palestine.*

Professor Theodore F. Wright, Ph.D., Cambridge, Mass., Honorary General Secretary of the Palestine Exploration Fund for the United States. His subjects are as follows:—

- (1) *The Building of Jerusalem.*
- (2) *The Overthrow of Jerusalem.*
- (3) *The Progress of the Palestine Exploration.*

The Rev. L. G. A. Roberts, Hudson Parsonage, Province Quebec, Canada. His subjects are as follows:—

- (1) *Work in and around the Holy City.*
- (2) *Work outside the Holy City.*
- (3) *Popular Lecture upon the General Results obtained by the Fund.*

Application for Lectures may be either addressed to the Secretary, 24, Hanover Square, W., or sent to the address of the Lecturers.

THE PALESTINE EXPLORATION FUND.

NOTES AND NEWS.

ON June 6th, Mr. F. J. Bliss gave an address to a large audience at 20, Hanover Square, on his experiences of two years' digging at "Tell el Hesy" (Lachish). Professor Flinders Petrie, D.C.L., occupied the chair, supported by James Glaisher, F.R.S., Major Conder, D.C.L., R.E., Colonel Watson, C.M.G., R.E., Walter Morrison, Esq., &c.

The following account appeared in the "Manchester Guardian" from a correspondent :—

"A simple diagram on a blackboard explained the position of the stream, which, itself 220 feet above the level of the sea, has its course 60 feet below the bluff upon which the earliest of ten towns successively raised was built about 3,000 years B.C. The mound rises to a height of 60 feet above the bluff, and the theory of its growth held by Professor Flinders Petrie has been confirmed by the investigations of Mr. Bliss. The lecturer showed that the mud bricks of which the towns had been built readily formed a foundation for rebuilding, the process of reconstruction having been carried out in each case at an increased altitude of something like 4 feet, so that at the building of the tenth town, which was ruined in the fifth century B.C., the present height of the mound would be nearly reached. Mr. Bliss explained that before he began his work there was no sign of any ruin on the mound, which was covered with a crop of beans. His first step was to set 30 men digging, assigning to each a space 10 feet square, with two or three dozen helpers to carry away the refuse earth. The work had not gone on for half an hour before Mr. Bliss plainly saw that he was digging in no ordinary soil, numerous pots, lamps, beads, &c., coming immediately to light. The domestic habits of the people resident in the neighbourhood to-day help to throw considerable light on the discoveries, for they were accustomed to use the same utensils as their progenitors in past ages. The results met with in excavating the second town were better, because the ground was freer from moisture. A burnt barley store was met with at a depth of 8 feet. The explorers found much difficulty in distinguishing walls from *débris*, on account of the nature of the building materials, so much so that Mr. Bliss spent his first month at the Tell in crumbling brick to ascertain its composition. When the third level was reached certain parallel lines of stones with intermediary wallings revealed the site of some large public structure, the stones having formed the basis of pillars built of wood or brick. Thus the work proceeded through six levels, when a bed of ashes was met with 4 or 5 feet thick

and 100 feet square. Many days were spent in its removal by 80 to 100 men, until at last Mr. Bliss almost despaired. But at length occurred the discovery which gave the romantic side to Tell el Hesi, in the finding of the other end of the correspondence which had been brought to light in Egypt, including letters from consuls and governors of Syrian towns to the kings of Egypt. The find was made immediately below the bed of ashes just referred to. The tablets on which the letters were written belong to B.C. 1400, and they prove conclusively the use of cuneiform writing at that date between one town of Palestine and another.

"At the conclusion of the lecture, Professor Flinders Petrie congratulated the Society on the co-operation of so able an excavator as Mr. Bliss, who combined in a manner almost unique familiarity with Syria and with England alike, not to mention his scientific acquirements. His method was not to be surpassed for accuracy, precision, and thoroughness of record. In certain other cases an unscientific method of procedure had occasioned fearful losses. But in this instance there had been no loss, while Mr. Bliss had obtained for us through his discovery of arms, pottery, &c., knowledge of an ancient civilisation which heretofore had been to us but a name."

In the course of his lecture Mr. Bliss explained how he was led into mistaking the tablet of burnt clay for stone. He had been warned against taking squeezes and moulds of clay tablets for fear of destroying them, so fragile were they supposed to be. The Tell el Hesi tablet was hard, and suffered no harm from squeezes and moulds. But the moment he took into his hands the Tell el Amarna tablets at Cairo, he saw at once that not only the general size, shape, and form of letters were similar, but that the material—burnt clay—was the same.

Mr. Bliss is now preparing a memoir of his work at Tell el Hesi, which will be published in the autumn. After a preliminary chapter, showing how his work fitted into that of Dr. Petrie, and stating the clues by which he determined the various town-levels, he will describe the appearance of each town, beginning with the lowest and most ancient one, together with the objects found. The final chapter will include some account of the camp-life, work-people, Arabs, &c. The book will contain many plans and illustrations. A key plan will show how the eight plans of the town may be fitted one above another.

Herr Schick sends word that excavations at the traditional site of the house of Tabitha at Jaffa have led to the discovery of many tombs and inscriptions. His report will be published in the next *Quarterly Statement*.

A correspondent writes from Jerusalem:—"The Holy City sees many curious and interesting sights. The somewhat pompous entry of Cardinal Langenieux, Legate of the Pope, on the 13th May, was certainly very remarkable and suggestive. Some 200 monks of the Franciscan and Dominican orders headed the procession, and the Cardinal himself walked side by side with the Latin Patriarch, under a silken canopy supported by six gilded poles, blessing the people as he went. There was little response to His Eminence's courtesy, as

most of the spectators were Moslems, or Jews, or Christians of other confessions. It is said here that this is the first time Jerusalem has been visited by a Cardinal. An immense crowd of French ecclesiastics and lay pilgrims are here."

Dr. Chaplin writes from Jaffa that he has been shown there the skin of a crocodile said to have been recently killed at a place called Mastank'a el timsah, the pool of the crocodile, on the Nahr ez Zerka. The fellahin ate the flesh and preserved only the skin without the head or feet. The animal seems to have been 8 or 9 feet long. The skin is in possession of Mr. Alexander Howard, the well-known tourist contractor, who speaks of presenting it to the Museum of the Fund. Six crocodile's eggs have also been found in the same locality. One was broken, one was sent to Dr. Selah Merrill, of Jerusalem, and four are to go to Paris.

Dr. Chaplin also reports that the plaster with ancient frescos has been removed from the walls of the Church of the Convent of the Cross, at Jerusalem, and destroyed. Amongst the figures portrayed were those of Socrates and Plato, who are occasionally represented as having prepared the way for Christianity on the walls of the porches of ancient churches, as at Moscow and elsewhere.

Respecting the Akka-Damascus Railway, since the inaugural ceremony in December last considerable progress has been made with the construction, and now five miles of rail have been made along the foot of Carmel, starting from Haifa, and it is hoped that very shortly the first river—the Kishon—will be bridged, and its waters flow beneath the iron rail. Our readers may look forward to the Jordan itself experiencing the same fate before next spring.

No important archaeological discoveries have yet been reported to us, but there can be hardly room for doubt that such discoveries will be made during the construction of this, the most important line of the country.

The Rev. Theodore E. Dowling, Honorary Secretary for Jerusalem, reports that visitors will now find a stock of Maps and Publications of the Society in a conveniently situated room lately opened *within* the Jaffa Gate, exactly opposite the Tower of David.

In connection with Mrs. Finn's "Note" in the *Quarterly Statement*, October, 1892, p. 266, it is interesting to record that Dr. Chaplin, who for a quarter of a century was interested in "The Jerusalem Literary and Scientific Society," which was founded in 1849, and was the parent of the Palestine Exploration Fund, presided at a meeting of the Jerusalem Association on May 25th, when it was unanimously decided to request the Jerusalem Literary and Scientific Society to lend their Library and Curios to the younger Association, consisting of twenty-five members.

At Dr. Chaplin's suggestion the attention of our readers is drawn to the fact that only three numbers of the *Quarterly Statement* are required to complete the bound set belonging to the Jerusalem Association, and Mr. Dowling will

thankfully acknowledge the receipt of one or all of the following copies, viz. :—

1870.—No. 7.

1871.—April, July. (New Series.)

During the late tourist season lectures were delivered for the benefit of travellers by the following members of the Jerusalem Association of the Palestine Exploration Fund :—

Rev. A. Hastings Kelk, M.A., "Walks about Jerusalem."

Rev. John Zeller, "The Druzes."

Rev. J. E. Hanauer, "The Walls and Gates of Jerusalem and their Folklore."

G. Robinson Lees, F.R.G.S., "The Temple Area" (with lantern illustrations).

In reply to an invitation, the Rev. A. H. Kelk lectured at the Grand New Hotel and Howard's Hotel, where travellers were detained by stress of weather. At the latter place the Earl of Lathom took the chair, the Rev. J. E. Hanauer and Mr. Lees attended to answer questions on behalf of the Fund.

A further series of lectures are in preparation for the next season, and the Rev. Theodore E. Dowling, the Hon. Secretary, is ever ready to give information to all enquirers.

Unusually violent storms raged in Syria and Palestine far into April. It is reported that 25 pilgrims were buried in one day at Ramallah, their deaths having been occasioned by exposure to the weather in the course of their pilgrimage.

The Rev. J. R. Macpherson, B.D., Kinnaird Manse, Inchtute, N.B., who translated into English from the original texts the *Pilgrimages in the Holy Land of Arculfus (670 A.D.) and Fetellus (1130 A.D.)* for the Pilgrims' Text Society, has been appointed Lecturer for the Palestine Exploration Fund in Scotland. His subjects will be found under the heading of Lecturers.

Index to the Quarterly Statement.—A new edition of the Index to the *Quarterly Statements* has been compiled. It embraces the years 1869 (the first issue of the journal) to the end of 1892. Contents:—Names of the Authors and of the Papers contributed by them; List of the Illustrations; and General Index. This Index will be found exceptionally useful. Price to subscribers to the Fund, 1s. 6d., post free; non-subscribers, 2s.

Raised Map of Palestine.—The want has long been felt, and the wish often expressed, that a map showing the physical features of the Holy Land on a scale sufficiently large to show at a glance the relative proportions of the mountains, valleys, plains, &c., should be produced on the basis of the Surveys of the Palestine Exploration Fund.

This has now been accomplished by Mr. George Armstrong, Assistant Secretary to the Fund. The Raised Map embraces the whole country from Baidbek to Kadesh Barnea, and shows on the east of Jordan nearly all that is known. It is a reproduction in bold relief of the recently issued map, on the scale of three-eighths of an inch to the mile.

The seas, lakes, marshes, and perennial streams are in blue, the watercourses on the plains and main roads are marked by a grooved line, the Old and New Testament sites in red, and the plains and hills are in white.

Names are given to the coast towns and a few of the inland ones; the others have numbers corresponding with a reference sheet. The map measures 7 feet 6 inches by 4 feet, and is on view at the Office of the Fund, 24, Hanover Square.

Casts of this Map in fibrous plaster, coloured and framed, can be had for £7 7s.

Photographs of the raised map are in preparation, and will be ready shortly. Size, 16½ inches by 8½ inches.

After two years' study of the published texts of the tablets found at Tell Amarna, Major Conder has completed a translation of them which the Committee of the Fund have published. In this, as in all their publications, the Committee beg it to be understood that the author alone is responsible for the opinions put forward.

A complete set of the Fund's publications, together with a copy of the new raised map of Palestine, have been sent to the Chicago Exhibition, and will be found in the British Section, Gallery of the Liberal Arts Building, by the side of the Oxford University Extension exhibit.

The Committee have appointed the Rev. Professor Theodore Wright, Hon. General Secretary to the Fund in the U.S.A., to be their representative at the Chicago Exhibition.

The following may be had on application to the Assistant Secretary at the Office of the Fund, viz. :—

Casts of the Tablet with a Cuneiform Inscription found at Tell el Hesi, price 2s. 6d. each.

Casts of the Ancient Hebrew Weight brought by Dr. Chaplin from Samaria, price 2s. 6d. each.

Casts of an Inscribed Weight or Bead from Palestine, forwarded by Professor Wright, Cambridge, Mass., U.S.A., price 1s. each.

Photographs of Tell el Hesi, showing the excavations, price 1s. each.

The following gentlemen have kindly consented to act as Honorary Local Secretaries :—H. S. Noblett, Esq., Ashton Place, Cork; The Rev. Geo. W. Baile, B.A., 17, Upper Sackville Street, Dublin; The Rev. Robert Macpherson, B.D., The Manse, Elgin; The Rev. J. R. Macpherson, B.D., Carse of Gowrie, Perthshire; E. F. J. Love, Esq., B.A., Queen's College, University of Melbourne; The Rev. Wm. Gillies, The Manse, Timaru, Melbourne; The Rev. W. W. Beveridge, Port Glasgow.

The translation of the first portion of M. Clermont-Ganneau's work, "Archæological Researches in Palestine," is completed. The second part, it is expected, will be in the hands of the translator soon.

The new railway from Jaffa to Jerusalem has been laid down on the three sheets of the large map. Scale 1 inch = 1 mile. Copies of these sheets are now ready. Price to subscribers to the work of the Fund, 2s. each ; non-subscribers, 2s. 6d.

The museum of the Fund, at 24, Hanover Square, is now open to subscribers between the hours of 10 a.m. and 5 p.m., except on Saturdays, when it closes at 2 p.m.

The Committee have to acknowledge with thanks the following donation to the Library of the Fund :—

“The Fifth Gospel.” By the Author, J. M. P. Otts, D.D., LL.D.

The Committee will be glad to receive donations of Books to the Library of the Fund, which already contains many works of great value relating to Palestine and other Bible Lands.

It may be well to mention that plans and photographs alluded to in the reports from Jerusalem and elsewhere cannot all be published, but all are preserved in the offices of the Fund, where they may be seen by subscribers.

The third and revised edition of “Heth and Moab” is now ready.

A new edition of “Twenty-one Years’ Work” is in course of preparation, and will be brought down to date. The new title will be “Twenty-seven Years’ Work.”

The first volume of the “Survey of Eastern Palestine,” by Major Conder, is accompanied by a map of the portion of country surveyed, special plans, and upwards of 350 drawings of ruins, tombs, dolmens, stone circles, inscriptions, &c. The first 250 subscribers pay seven guineas for the three volumes ; subscribers to the “Survey of Western Palestine” are privileged to have the volumes for this sum. The price will be raised, after 250 names are received, to twelve guineas. *The Committee are pledged never to let any copies be subscribed for under the sum of seven guineas.* Mr. A. P. Watt, 2, Paternoster Square, is the Sole Agent. The attention of intending subscribers is directed to the announcement in the fore part of this number.

Mr. H. Chichester Hart’s “Fauna and Flora of Sinai, Petra, and the Wady ‘Arabah” has been completed and sent out to subscribers.

The books now contained in the Society’s publications comprise an amount of information on Palestine, and on the researches conducted in the country, which can be found in no other publications. It must never be forgotten that no single traveller, however well equipped by previous knowledge, can compete with a scientific body of explorers, instructed in the periods required, and provided with all the instruments necessary for carrying out their work. The

books are the following (*the whole set (1 to 7 and 9 to 18) can be obtained by subscribers to the Fund on application to the Head Office only (24, Hanover Square, W.), for £3 10s. 0d., carriage paid to any part in the United Kingdom only*):—

By Major Conder, R.E.—

- (1) "Tent Work in Palestine."—A popular account of the Survey of Western Palestine, freely illustrated by drawings made by the author himself. This is not a dry record of the sepulchres, or a descriptive catalogue of ruins, springs, and valleys, but a continuous narrative full of observations upon the manners and customs of the people, the Biblical associations of the sites, the Holy City and its memories, and is based upon a six years' experience in the country itself. No other modern traveller has enjoyed the same advantages as Major Conder, or has used his opportunities to better purpose.
- (2) "Heth and Moab."—Under this title Major Conder provides a narrative, as bright and as full of interest as "Tent Work," of the expedition for the *Survey of Eastern Palestine*. How the party began by a flying visit to North Syria, in order to discover the Holy City—Kadesh—of the children of Heth; how they fared across the Jordan, and what discoveries they made there, will be found in this volume.
- (3) Major Conder's "Syrian Stone Lore."—This volume, the least known of Major Conder's works, is, perhaps, the most valuable. It attempts a task never before approached—the reconstruction of Palestine from its monuments. It shows what we should know of Syria if there were no Bible, and it illustrates the Bible from the monuments.
- (4) Major Conder's "Altaic Inscriptions."—This book is an attempt to read the Hittite Inscriptions. The author has seen no reason to change his views since the publication of the work.
- (5) Professor Hull's "Mount Seir."—This is a popular account of the Geological Expedition conducted by Professor Hull for the Committee of the Palestine Fund. The part which deals with the Valley of Arabah will be found entirely new and interesting.
- (6) Herr Schumacher's "Across the Jordan."
- (7) Herr Schumacher's "Jaulân."—These two books must be taken in continuation of Major Conder's works issued as instalments of the "Survey of Eastern Palestine." They are full of drawings, sketches, and plans, and contain many valuable remarks upon manners and customs.

By Walter Besant, M.A.—

- (8) "The Memoirs of Twenty-one Years' Work."—This work is a popular account of the researches conducted by the Society during the twenty-one years of its existence.
- (9) Herr Schumacher's "Kh. Fahl." The ancient Pella, the first retreat of the Christians; with map and illustrations.

By George Armstrong—

- (10) Names and Places in the Old and New Testament and Apocrypha. This is an index to all the names and places mentioned in the Bible and New Testament, with full references and their modern identifications, as shown on the new map of Palestine.
- (11) Besant and Palmer's "History of Jerusalem."—The "History of Jerusalem," which was originally published in 1871, and has long been completely out of print, covers a period and is compiled from materials not included in any other work, though some of the contents have been plundered by later works on the same subject. It begins with the siege by Titus and continues to the fourteenth century, including the Early Christian period, the Moslem invasion, the mediæval pilgrims, the Mohammedan pilgrims, the Crusades, the Latin Kingdom, the victorious career of Saladin, the Crusade of Children, and many other little-known episodes in the history of the city and the country.
- (12) Northern 'Ajlûn "Within the Decapolis," by Herr Schumacher.

By Henry A. Harper—

- (13) "The Bible and Modern Discoveries."—This work, written by a Member of the Executive Committee of the Palestine Exploration Fund, is an endeavour to present in a simple and popular, but yet a connected form, the Biblical results of twenty-two years' work of the Palestine Exploration Fund. The writer has also availed himself of the discoveries made by the American Expeditions and the Egyptian Exploration Fund, as well as discoveries of interest made by independent travellers.

The Bible story, from the call of Abraham to the Captivity, is taken, and details given of the light thrown by modern research on the sacred annals. Eastern customs and modes of thought are explained whenever the writer thought that they illustrated the text. This plain and simple method has never before been adopted in dealing with modern discovery.

To the Clergy and Sunday School Teachers, as well as to all those who love the Bible, the writer hopes this work will prove useful. He is personally acquainted with the land; nearly all the places spoken of he has visited, and most of them he has moreover sketched or painted. It should be noted that the book is admirably adapted for the School or Village Library.

By Guy le Strange—

- (14) "Palestine under the Moslems."—For a long time it had been desired by the Committee to present to the world some of the great hoards of information about Palestine which lie buried in the Arabic texts of the Moslem geographers and travellers of the Middle Ages. Some few of the works, or parts of the works, have been already translated into Latin, French, and German. Hardly anything has been done with them in English, and no attempt has ever been made to systematise, compare, and annotate them.

This has now been done for the Society by Mr. Guy le Strange. The

work is divided into chapters on Syria, Palestine, Jerusalem, and Damascus, the provincial capitals and chief towns, and the legends related by the writers consulted. These writers begin with the ninth century and continue until the fifteenth. The volume contains maps and illustrations required for the elucidation of the text.

The Committee have great confidence that this work—so novel, so useful to students of mediæval history, and to all those interested in the continuous story of the Holy Land—will meet with the success which its learned author deserves.

By W. M. Flinders Petrie—

- (15) "Lachish" (one of the five strongholds of the Amorites).—An account of the excavations conducted by Mr. Petrie in the spring of 1890, with view of Tell, plans and sections, and upwards of 270 drawings of the objects found.

By Trelawney Saunders—

- (16) "An Introduction to the Survey of Western Palestine, describing its Waterways, Plains, and Highlands, with special reference to the Water Basin—(Map. No. 10)."
- (17) "The City and the Land."—A course of seven lectures on the work of the Fund.
- (18) "The Tell Amarna Tablets," including the one found at Lachish. By Major C. R. Conder, D.C.L., R.E.

The new Map of Palestine embraces both sides of the Jordan, and extends from Baalbek in the north to Kadesh Barnea in the south. All the modern names are in black; over these are printed in red the Old Testament and Apocrypha names. The New Testament, Josephus, and Talmudic names are in blue, and the tribal possessions are tinted in colours, giving clearly all the identifications up to date. It is the most comprehensive map that has been published, and will be invaluable to universities, colleges, schools, &c.

It is published in 21 sheets, with paper cover; price to subscribers to the Fund, 24s.; to the public, £2. It can be had mounted on cloth, rollers, and varnished for hanging. The size is 8 feet by 6 feet. The cost of mounting is extra (*see* Maps).

In addition to the 21-sheet map, the Committee have issued as a separate Map the 12 sheets (*viz.*, Nos. 5-7, 9-11, 13-15, 20-22), which include the whole of Palestine as far north as Mount Hermon, and the districts beyond Jordan as far as they are surveyed. *See* key-map to the sheets.

The price of this map, in 12 sheets, in paper cover, to subscribers to the Fund, 12s. 6d.; to the public, £1 1s.

The size of the map, mounted on cloth and roller for hanging, is 4½ feet by 6¾ feet.

Any single sheet of the map can be had separately, price, to subscribers of the Fund, 1s. 6d. Mounted on cloth to fold in the pocket suitable for travelling, 2s. To the public 2s. and 2s. 6d.

Single copies of these maps in sheets, with cover, can be sent by post to all foreign countries at extra charge of 1s.

A copy of names and places in the Old and New Testament, with their modern identifications and full references, can be had by subscribers with either of these maps at the reduced price of 2s. 6d.

The first and second parts, Vol. I, of "Felix Fabri," were issued to subscribers to the Pilgrims' Text Society in May and July of last year. Part I, Vol. II, of the same work was issued in March last; Part II will be ready shortly.

Branch Associations of the Bible Society, all Sunday School Unions within the Sunday School Institute, the Sunday School Union, and the Wesleyan Sunday School Institute, will please observe that by a special Resolution of the Committee they will henceforth be treated as subscribers and be allowed to purchase the books and maps (by application only to the Secretary) at reduced price.

The income of the Society, from March 22nd, 1893, to June 21st, 1893, was—from annual subscriptions and donations, including Local Societies, £216 17s. 10d.; from all sources—£352 4s. 2d. The expenditure during the same period was £618 16s. 4d. On June 23rd the balance in the Bank was £355 8s. 2d.

Subscribers are requested to note that the following can be had by application to the office, at 1s. each:—

1. Index to the *Quarterly Statement*, 1869–1880.
 2. Cases for binding Herr Schumacher's "Jaulân."
 3. Cases for binding the *Quarterly Statement*, in green or chocolate.
 4. Cases for binding "Abila," "Pella," and "Ajlûn" in one volume.
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Back numbers of the *Quarterly Statement*.—In order to make up complete sets, the Committee will be very glad to receive any of the following numbers:—

No. II, 1869; Nos. VI and VII, 1870; No. III, 1871; January and April, 1872; October, 1873; January, 1874; January and October, 1875; January, 1883, and January, 1886.

While desiring to give every publicity to proposed identifications and other theories advanced by officers of the Fund and contributors to the pages of the *Quarterly Statement*, the Committee wish it to be distinctly understood that by publishing them in the *Quarterly Statement* they neither sanction nor adopt them.

Subscribers who do not receive the *Quarterly Statement* regularly are asked to send a note to the Secretary. Great care is taken to forward each number to all who are entitled to receive it, but changes of address and other causes give rise occasionally to omissions.

(To face p. 191.)

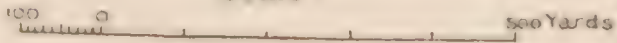
PLAN OF JERUSALEM.

TO ILLUSTRATE HERR SCHICK'S PAPER ON THE "SECOND WALL."



1-5 Towers of King Uzziak

Scale



LETTERS FROM HERR BAURATH SCHICK.

I.—THE SECOND WALL OF ANCIENT JERUSALEM.

THERE are not many things connected with the Holy City on which such an amount of zeal, skill, and learning has been bestowed by scholars as the controversy respecting the "second" wall of ancient Jerusalem. The reason of this is its important bearing on the site of Calvary. The notices in regard to this wall in Josephus are short and vague, and hence open to various explanations. If I write on this matter, it is not that I presume to complete or correct what other and more competent writers have said, but only to state simply my opinion with reference to it.

1. Josephus ("Bel." V, iv, 2) says: "The second wall started at the Gate Gennath, which belonged to the first wall, encompassed the northern quarter of the city, and ended at the tower Antonia." The latter point is well known, and the starting point was found near the present Castle some years ago, so that we know, therefore, the two end points. The Greek word means "embracing, or encircling, or encompassing"—from which some writers think the line of the wall formed a kind of curve or half circle—but even a broken line may embrace a tract of ground, or anything else, and I think one is free to draw the course of this wall in a curve or in a serpentine line, or even zigzag. I take it to have been a somewhat broken line, forming at the same time a kind of bow or curve.

2. Length of the wall.—Josephus, in "Bel." V, iv, 3, gives this wall 14 towers. Now the average of the distance from one tower to the other (including the tower itself) of the present city wall, and especially those standing on old foundations, is on an average 173 feet. The line I give of the second wall is 2,600 feet long, 2 end spaces and 14 towers, and the spaces between them give 15 distances, or parts, and dividing the length of the wall by this number gives $173\frac{1}{3}$ feet for each, so this will agree with my line as regards length. Josephus, in "Bel." V, iv, 3, gives the distance of the towers from one another as 200 cubits, or 300 feet, taking the cubit at 18 inches, but this must be an error; the distance of 300 feet is too great. He gives to the third wall 90 and to the first 60 towers (the second wall with its 14 towers, being a middle one, does not count), making 150 towers, and if one-fourth of the 60, or 15, of the old wall be deducted, as standing on the inside portion of the wall, there will be 135 towers in the outer line, which at 200 cubits distance from one another would give a circumference of 27,000 cubits, or 40,500 feet. Now a stadium is generally reckoned as 607 English feet, and we should

have 67 stadia, or twice the 33 stadia Josephus gives for the whole circumference. If we read 100 cubits instead of 200, all will agree very neatly.

The course I give to the wall is the following :—

The starting point at the present Castle was found with a long piece of the wall going as far as the road running eastwards, 182 feet north of the corner of the Castle wall in the ditch, there it bends N.E.N., and the zigzag line of this street is the result of the former wall with its towers, to the corner of the street where it bends eastward, as did the wall. In the corner and lower down, where it crosses Christian Street, some old remains were removed during my residence in Jerusalem. From Christian Street the wall went in a straight line to the Muristan, where also traces were found. Upon this piece stands the minaret of Omar. The large cistern under the new Greek building formed a kind of ditch, and at the Muristan the wall bent northwards, and had in it a Castle (the middle tower which the cunning Jew "Castor" defended against the Romans), the ditch west of which is traceable. At the northern end of the Castle (of which remains are still existing) the wall bent eastwards, and stood for a few hundred feet on a high rock-scarp, a good deal of which can be seen, and the rest I have ascertained. The said rock-scarp formed an angle ¹ going southwards for about 300 feet and so formed a high rock platform of about 350 feet long and wide. Either from the north-east or the south-east corner of this platform the wall went eastwards down into the valley, crossed it and went onwards to Antonia, either along the crooked road or more to the south. I believe there were two walls, one made by Hezekiah, one by Manasseh. (2 Chron. xxvii, 3.)

To show the probability of this line I have to say further :—

- (a) That the ancient city had underground chambers, caves and cisterns hewn in the rock. So it was found outside the present city on the eastern hill, or Ophel, and on the western hill or traditional Zion. So I found it in several places *inside* the city when excavations were made. But north of the line I point out for the second wall, there is nothing of the kind, the *old* city extended *not* further north; and so it is with tombs.
- (b) In the holy city it was not lawful to have graves or tombs, but at the site of the Holy Sepulchre are found many, not only those well known for a long time in the west side of the church, but also under the Coptic convent.² So it is clear this place was *outside* the ancient city. Further :—
- (c) As to the question of the *size* of the ancient city and the *population* thereof I wish to say the following :—Several writers have remarked that if the place where the Church of the Holy Sepulchre now stands had been outside the wall, the ancient city would have been very small and could never have contained such

¹ See *Quarterly Statement*, 1890, p. 20.

² *Ibid.*, 1887, p. 154.

a great population as it is supposed to have had. All who say so are in a mistake. They think Jerusalem was like any other city, but this was not the case. In the Jerusalem established after the captivity, there were *no private houses* which were the property of individual inhabitants; the whole belonged to the State or the public. It was *one large institution* or establishment for the whole people; and with regard to lodgings, *one large lodging-house*. The administration of the State was everywhere—the school, the artists, the learned and skilled men of all sorts were part of the State. In the former city, which the Chaldeans destroyed, it was only *partly* so, as there were some people having their own houses, resulting from the former circumstances. So says David to Shimei (1 Kings ii, 36), “Build thee a house in Jerusalem.” But when after the captivity the Jews came back and began to reside in the ruins and to build up the walls and the houses, all was *public* property and remained so; the theoretical idea was more fully carried out than in the former time, and Psalm cxxii, 3, was fulfilled: “Jerusalem is built as a city compact together,” *i.e.*, all one building or lodging-house. If this was the case many more people could live for a week or two during the feasts than in a city where there are private houses. As now lodging-houses have their managers or overseers, so it was at Jerusalem. The husband of Mary, the mother of Mark, was such a manager (Acts xii, 12), also the “such a man” of Matthew xxvi, 18, and “the good man of the house” of Mark xiv, 14, and Luke xxii, 11, in whose guestchamber Jesus wished to eat the passover. Jerusalem was an exception to all other cities in the country. There was the Temple, the centre of the religious duties of the people, the schools with their teachers and learned men for teaching the people. There were the rulers in every branch of administration, the tradesmen, the merchants, and all sorts of people belonging to a State household, including also soldiers and policemen.

- (7) South of the second wall, as I draw its line, there is, even down to Siloah, a deep layer of rubbish, earth, or *débris*, and at no place inside the present town does the rock crop out, except on the brow of the hill opposite Robinson's Arch. But north of this line the rock appears above the ground in many places, and there is much less rubbish and *débris*, so that it is clear this part never belonged to the ancient city, but to the town after Christ. Then, when the town sewers were made, a pavement of large, flat stones was found in the square a little south of the Damascus Gate, where four roads meet, extending southwards to the point where very likely the southern branch of the second wall crossed the valley, but not further south, from which I infer that the new town went so far.

II.—ARABIC BUILDING TERMS.

There are many technical expressions in Arabic, which I observe are in Europe not fully known, and which I learned in building houses here. I mean expressions which occur in the process of building—embracing materials, tools, and various modes of building.

Of the *stones* themselves used in this country in building, I gave some account five years ago, see *Quarterly Statement*, 1887, p. 50, so I may omit them here, but add—

1. Expressions denoting the *shape* of the stones, either by nature or when artificially formed :—

Mak-dam, مقدم in singular; Makâdim, مقادیم in plural—are hard, flat stones, from 2 to 6 inches thick, thicker or thinner according to the strata, broken in pieces of 6 to 10 inches broad, and from 10 to 15 inches long. They are generally used to make arches, which have to bear much weight.

Sha-kât (plural), شكاة, large blocks, which the stonecutter has to dress in any shape or form.

Jebsh, جبش, rough, shapeless stones of all sorts, large and small, to be used in filling the inside of the walls.

Sar-ar (plural), صرار, small stones, shapeless, used for filling cavities occurring between Jebsh and other stones.

Shek-fi (singular), Shekfa't (plural), شكفات, meaning a piece, especially a flake used to lay under other stones, when not high enough, or not equal; a great many of them are used in modern building.

Keld (singular), كلد, a larger flake, thin, long and broad, and on one side thicker than on the other, used in a similar way, and also to fill the space between two rough stones.

Daf'a-ul, دفاعوب, a somewhat long but narrow and shapeless stone, used for a similar purpose.

Rau-war, روار, an adjective term, indicating that the stone is broad and going deep into the wall.

Sen-di-faw-eh (singular), سندافاويه, the opposite of the "Rauwar." A stone square on its face towards the outside, but not going deep into the wall.

Sakeof (singular), ساكوف, a slab or covering stone, laid across some opening or channel.

Akkâd (plural), عقاد, rough but flat stones to be used in vaultings.

2. Expressions denoting the degree of dressing :—

Ham-eh, خامی (adjective), meaning quite rough, but squared.

Dal-dish, طلثیش (adjective), meaning roughly hewn, and its face in some degree dressed.

Emsensim, امسسم (adjective), the face fully dressed, but not smoothed.

Eddalibi, اتطبه, fully dressed, but the face not smooth. It has small dots or points over the whole face, done (when the cutting is finished) with a mallet having many teeth on its surface.

3. Expressions on architectural parts or pieces :—

Zâwieh (singular), زاوية, is a full-dressed corner stone.

Kelb and 'Arak, كلب, عراقه. These are dressed stones for the jambs of doors and windows. The Kelb has a groove for the reception of the door, and the 'Arak is put across over it.

Bor-dash-eh (singular), برطاشه, the foot-stone or threshold of a door or window.

Ba-ra-dish (plural), براطیش (of the same).

'Attaby (singular), عتبة, plural, Attâb, are the top stones of doors or windows, i.e., the lintels.

Jeb-hah, جبّه. The squared edging stones of the margins of a floor or terrace, whether large or small. These stones are in form like the Attâb or Baradish, but in general not so thick, and narrower. They may be of any length, and cut at least on two long sides.

Zam-nar, زمار. Nearly the same kind of stones, but cut on three long sides and more carefully worked, and of equal thickness. They form the string courses in walls, and often project. Their faces must be good and regular. Sometimes they are worked out as a cornice.

Ziffer (singular), زفر, a corbel; Z'furah (plural), زفورة.

4. Terms denoting parts of masonry :—

Haet (singular), حائط, a wall in general.

Kel-lin (singular), گلین, Ke-lla-lin (plural), گلالین, a wall of some thickness. The chief walls of a building, not piers.

Mud-mak (singular), مدماک, Ma-da-mik (plural), مدامیک, a layer of stones in a wall, all the stones being of the same height.

Lak-dah, لقطه, the back part of a wall made up of small stones of a wall, which has dressed stones on one side.

Dol-meh, *دلمه*, a wall made with small rough stone masonry, in framework of timber (or, a framework of thin timbers, filled up with masonry of small stones).

Jedarah, *جدار*, a dry wall, without mortar.

Boog-da-deh, *بُعدادی*, a wall made up as a framework of wood, and instead of the openings being filled with small rough stone masonry, having laths nailed over on both sides, and then plastered.

Ro-sen-eh, *روزنه*, is a skylight, or any hole in a vaulting.

Keb-ba, *خبة*, a niche or recess in a wall.

Bab, *باب*, is a door of any size.

Shubâk, *شباك*, a window of any size.

Mij-was, *ميجوز*, a window with two equal openings, divided by a slender upright stone.

Ham-a-ly, *حمال*, the discharging arch over another arch, to make it stronger, or over a lintel, &c.

Kōs, *قوس*, is an arch in general.

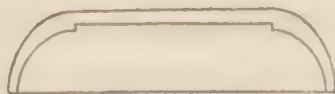
Kan-ter-eh, *قنطرة*, an arch of some depth, as of a bridge, &c.

Ak-ked, *عقد*, means in general a vault of any size or form.

5. Kinds of archings :—

Kubbet, *قبة*, a round-shaped dome, in general semicircular, sometimes even higher.

Dak-ken-eh (singular), *طكنه*, a dome not of a round shape, generally



longer than wide and from all four sides arched up so that often in the inside, at the highest point, a flat horizontal centre is created.

Sa-leeb—Cross, *صليب*, a cross-shaped vault; generally ribs go up to the centre from four piers, sometimes only from the walls.

Em-she-ten, *امشيطن*, an arch or vault made irregular on account of the curious shape of the room to be covered, as more or less than four-sided, or of unequal width or length (the word means devil-like).

Am-boob, **أعبوب**, a tunnel-shaped arch or vault, *i.e.*, a half cylinder-shaped arch, resting on two walls.

Kâl-eh, **قال**, the wooden form or frame on or over which arches of doors and windows, &c., are made.

Tuo-bar, **طوبار**. The form or scaffolding on which the vault of the whole room is built, not made of timber, but of brushwood and earth. If covered with boards it is then called Kâleb.

Tors, in singular, **ترس**, or Troos, in plural, are the four walls, crescent-shaped at top, on which a Saleeb or cross-vaulting has to be put. It is also called Helal, *i.e.*, Crescent.

Rookbeh (plural), **رقيب**, are the piers, generally right-angled in section, from which the ribs of the cross arches or other arches arise. Also a pier or pilaster to carry any essential structural parts of a building, as beams of wood or iron rafters, but generally arches of some sort are put on them.

Sha-miah, **شمعة**, is also a Rookbeh, but not attached to the wall; a single free-standing *square* pier; a round one is a pillar.

Sook, **صوك**, are the ribs of a cross arch.

Soor-ra, **سرة**, is the central or highest point of a cross arch, where the ribs meet.

Ghallak, **غلق**, is the key-stone or last closing-stone of any arch or vault.

Mastabeh, **مستبة**, is a stone bench of any size.

Meddy, **مددة**, is a floor made of concrete.

Raff, **رف**, is a shelf on a wall, either of stone or wood or other material.

Teen, **طين**, the general name for mortar.

En-ha-ty, **انحاطة**, the dust and small fragments produced in stone-cutting, and used instead of sand.

Kessermill, **قصرملة**, the ashes from the fellahin baking-ovens or Taboons, used in making water-tight roofs or meddy, or whenever water has to be kept out. It is mixed with a third part of lime, and becomes exceedingly hard after a time.

Ham-rah, **حمره**, pounded bricks, mixed with lime; it makes the best cement for cisterns, &c.

Bahks, بحص, all sorts of smallest stones or pebbles.

Ban-a-dook, بندوق, is lime not fully burnt, so that it does not slake and is fit for nothing (the word means unlawful born).

Ka-wa-doos, قادوس, earthen pipes (burnt).

Toob, طوب, earthen (burnt) bricks.

Ksâ-rah, قسارة, the white or finishing plasterings of the walls.

Mer-shy, عريشة, the first coat of plastering, with an inferior mortar to make the surface of the wall even before the finishing coat is put on.

Kah-ly, قحله, pointing the joints of stone walls.

Koffy, قفة, straw baskets to carry earth and small stones.

Ghorbal, غربال, a sieve.

Kaff, كف, meaning a hand, a little board to keep plaster or mortar on in one hand, when plastering.

TOOLS, &c.

(a.) For Stone Breaking.

Nokh-el Em-dak, نخل الاعدق, a long iron with steel head, by which the holes are beaten into the rock.

Nokh-el Em-kau-wa-be, نخل الامقاوابة, a thick, long iron rod, with steel head to move the blocks or when there is a crack in the rock, to put it there and break the rock in two, if possible.

Es-tin, العصى, an iron wedge, to be beaten into cracks of the rocks to break it to pieces.

Em-he-ddy, الاعمدة, a very large and heavy hammer, by which they break the pieces of rock into smaller pieces, fit for a regular masonry stone—of larger or smaller size, just as it comes out.

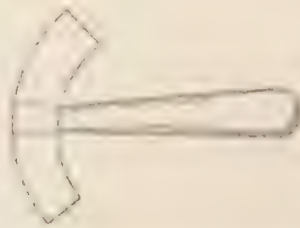
Em-ka-ta', القطاعة, a hammer, like a chisel at both ends, with which they make holes in the rock about 5 or 6 inches deep, putting the wedge into it, with iron plates on both sides, and then driving the wedge firm in with a large hammer: and after half a dozen heavy strokes the stone becomes cracked, and then the nokhel is used to bring the pieces asunder.

Ma'-lak-a, معلقة, is a kind of a spoon, with which they take out the deposit caused by beating with the nokhel when making the holes for gunpowder.

I-bri (needle), الابرة, a thin iron rod put into the hole in the rock, when the gunpowder is filled in, and made up with clay and small stones, then taken out and the space filled with gunpowder.

(b.) *General Tools of the Stone-cutters.*

Shakoosh, شاقوش, a hammer of such a form. The chief thing is



that the corners of the steeled iron are very sharp, that it may work with a heavy chisel stroke.

Terta-beek, طر تبيك, is a hammer of such a shape. One end is toothed,



the other is sharp-pointed.

Sho-ky, شوكة, a sharp-pointed steel tool, 8 inches long.

Z'meel, الزميل, a chisel, $\frac{3}{4}$ inch broad and 8 inches long.

Zâweah, الزاوية, an iron mason's square.

Sha-heo-tah, شحوطه, a kind of hammer, on both sides broad, and with teeth.

Mason's Tools.

Shak-oof, شاقوف, a large hammer of this form.



Mis-ta-rin, مسترين, a ladle, larger or smaller; all the other tools he has in common with the stone-cutter.

Meezân, ميزان, a weight of a special kind, by which the mason is enabled to build the wall perpendicularly, it is a piece of wood with a hole in the middle through which a thin rope is carried on which hangs a heavy round-shaped weight of brass, its diameter



equalling the length of the wood. He puts the wood on the surface of the stone and lets down the weight as far as he wants to see all to be perpendicular, and draws it up again to detect any fault.

Mij-ra-fah, معبرفة, a kind of hoe with a very broad plate, very con-



venient for working with earth, small stones, mortar, &c.

Fas, فاس, an axe with two heads, thus—



Krek, كريك, a shovel or spade.

Na-kir, الناكير, a board on which boys carry the mortar. It is about $1\frac{1}{4}$ feet broad and $1\frac{1}{2}$ to 2 feet long.

Kab-ban, قبان, a balance by which the weight of lime, &c., is ascertained. A steelyard.

Sel-lem, سلم, a ladder.

Sel-lem tesleek, سلم تصليق, a rope ladder.

Kedeh, قدّة, a long straight iron rule.

Kerker, قرقر, an iron frame, moving on a handle, on which a cord is rolled up—a very convenient instrument. The cord is carried

through one of the hooks at the corners, and then it hangs down on the wall, by its own weight keeping the cord straight.



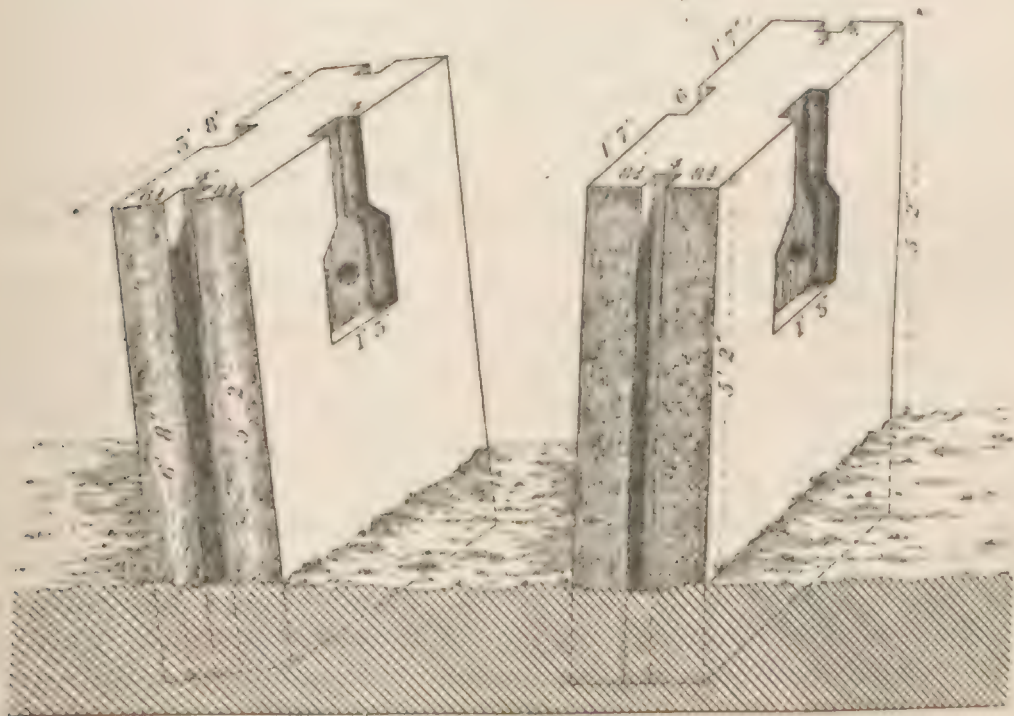
M'alaka, *آلة*, a spoon. This is a very convenient tool. It is used as a hammer, as a lever, as a smoother, &c.



III.—THE RUINS OF JUBEIAH.

On the large map of the Palestine Exploration Fund, Sheet XVII. (i. l. between Kulonieh and Kustul, a little south), is found "Kh. el

ISOMETRICAL PROJECTION



STANDING STONES.

Jubeiah," meaning "the Ruins of Gibeā." In Vol. III it is said, on p. 116, "traces of Ruins." The proprietors of this ground, in offering it

for sale, said to me : " There are large and interesting ancient stones in it." Hoping to find something of importance, I went one day there and examined the place. It is the site of an ancient city now used as a vineyard, but many walls look out from the ground, and in some degree even the houses can be traced. They are for the greater part of roughly-hewn stones, and the man said wherever they dig such stones are found. The place, like all those ruined places, is of moderate extent, a little declining towards the east, just on the brow where the ground falls rapidly down to the Valley of Kulonieh. Although not prominent like Kûstûl, being somewhat lower, yet it can be seen from all the higher eastern regions for a great distance. Two upright standing stones were shown to me, on the northern edge of the ruins. They seem to be *in situ*, but in course of time they have become inclined to the sides, the eastern one more than the western. They are of hard stone, once nicely cut, but have suffered a little by weathering in course of time. They are of an oblong-square shape, 3 feet 8 inches wide, 1 foot 9 inches thick, and about 6 feet 8 inches long. As they are standing in the ground the exact lengths cannot be ascertained, but they are 5 feet 2 inches high above ground, and very likely 18 inches in the ground. The top faces are flat, having no grooves or projections, as if something had been placed upon them.

But most curious are grooves on all four sides. On the narrow sides in the whole length, 4 inches wide and 4 inches deep; on the broad sides from the top edge downwards 2 feet 6 inches, 4 inches deep and 7 inches wide, but about the middle the stone widens to 14 inches. In the middle of this wider part is a round hole piercing the stone, 4 inches in diameter. The drawing on p. 201 will illustrate this.

These two stones are exactly alike, stand on a level terrace, about 30 feet wide and 45 feet long, not exactly in the middle, but somewhat towards the north-western corner.

About 75 feet east of these stones are two others lying on the ground. They are flat and square-shaped, nicely hewn and smoothed, 4 feet 3 inches long, 3 feet 8 inches broad, and 2 feet thick. On the surface of one is a curious carving, in shape resembling a cross, although it was originally not made as such. It is rounded out on all sides, and so that the cross point is the deepest part, about 4 inches.

At another part of the ruins I found part of an ancient oil mill. The stone is broken and was once 6 feet 2 inches long, 4 feet 9 inches wide, and 1 foot 4 inches thick, has in the centre a square hole for a piece of wood in which the pan of the roller-stone axis was fixed. On the two narrow ends are depressions, 8 inches deep and 11 inches wide, in which probably upright wooden poles were put and their tops joined by a crosspiece in which the upper pan for the other end of the axis was fixed.

The upper or millstone did not roll round, but only turned on its axis. The most curious point is a circular groove, 2 inches wide and

2 inches deep, in which apparently the teeth of the millstone ran in order that the stuff already crushed by the heavy stone should be more finely ground. Similar mills are still used in the country. These millstones and others of less interest which I found in the ruins had apparently nothing to do with the upright stones.

What might these have been? A question which everyone who sees them asks. My companion said it was an entrance to a house, and the holes were for the bar for shutting it. But a door it was not, as can be very easily shown.

One might suppose it was a press for oil or wine, but the grooves would then be useless, and it is difficult to see in what manner the actual pressing could be done.¹

PEASANT FOLKLORE OF PALESTINE.

Answers to Questions.

By PHILIP J. BALDENSBERGER, Esq.

QUESTION 1. *Describe the Sacred Trees.*—The sacred trees are the Lotus tree (*Zizyphus spina christi*) سدر. Welys live in them as soon as a tree has reached its fortieth year, and woe to the man who then cuts such a tree: the Wely ruins him. It is said these trees are usually to be seen lighted on Thursday evening, and that the music of the sacred instruments of unseen spirits is occasionally heard there, as at the group of trees south of Nā'aneh and those north-east of 'Akir, the lights are seen visiting each other by night, on Thursdays.

The Tamarisk (*Tamaria syriaca*), قتل, is very holy. They are also haunted (ممسكون), and whenever the wind blows across them, it is distinctly heard, how they call Allah! Allah! sighing! Cutting such trees is at least as sinful as cutting the lotus tree.

The Olive tree is most sacred as giving food and light. It may be inhabited or not; if a man cut an olive tree down he would have no peace afterwards. The difference between the olive-tree cutter and the others is that the last receives the punishment direct from God.

Palms (نخل) and Cactus (صبر) have drunk of the water of life (ميه الحيه) and are, therefore, of the same substance as a human being.

Other trees may be sacred, but then they are generally such as grow round the Makam, or Wely, or some spot belonging to a martyr, as the

¹ Similar stones exist at Khurbet en Niāteh and will be figured in M. Clermont-Ganneau's forthcoming work.—[Ed.]

Arba'in, near Saris and Beit Mahsir. There 40 martyrs were killed in the wars with the infidels.

Fig, Carob, and Sycamore trees are the abode of devils. It is especially dangerous for a father of children to sleep beneath them, as they destroy many people.

They tie rags to the sacred trees in exchange for others, *i.e.*, to take home a remembrance and blessing from the shrine of the Wely. The rag is sanctified after having been tied there for some time, and preserves against evils. Stones are piled on each other where a holy place first becomes visible when approaching it, generally at the turn of a mountain. Putting the stones, they say : *يا حبر انا بشهد معك اليوم .* وانت اشهد جمى فى يوم القيامة "O stone, I witness with thee to-day ; witness thou with me on the Resurrection Day."

Question 2. *Describe any Sacred Footprints, &c.*—No sacred footprints are known to me except those well known in and about Jerusalem, as the sacred rock of Elijah before Mar Elias, the stone in which the "holy family" hid on their flight to Egypt, between Mar Elias and Tantur.

Springs of water are almost all guarded by spirits (رعد, lit. guardian spirit), which appear in shape of men or beasts. The guards of the Urtas spring are a white and a black ram, which butt every Thursday night, and would butt any one going in on that night.

In the village of Mughullis (Philistia), is the Bir umm el lehman (بديرام الهمام), which cures sickness, and so also 'Ain Musa (عين موسى), between Soba and Castal. Bir Eyub and 'Ain Sitti Mariam, at Jerusalem, are healing, and most wells in the plain have a sheikh living inside. Children have been gently put into openings in the wall of the well by them, when they had looked into such wells.

The old bridge over Nahr Rubin is guarded by a Rassa (رعد). A Bedawy of the sands met him one day, and was frightened. He became impotent, and died three years afterwards.

Question 3. *Have they any stories about Ghosts, Ghouls, &c. ?*—The ghou (غول) is passing into mythology.

The Jân (جان) live underground. They have a sultan (who is dead, so that there is now a kind of interregnum), and governors, courts, &c., just as on earth. But their courts are just, and their judges take no bribes, owing to the holiness of Palestine ; they do not appear often. In Egypt they are seen very often. The principal difference between them and us is that they neither plough nor sow, they must take their victuals from human creatures (اناس). All food-places are

guarded by them, but they can only take wheat from the threshing-floor, or bread from the oven when men move it without saying the first sentence of the Koran (بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ). They are most active at sunset. Whistling attracts them. The oven and the fire are their favourite abode, therefore a person quenching the fire without saying the above words is beaten by them, either lame or simply stunned. They live below the threshold (عطبة) of every house, and women may never sit there. During the month of Ramadan they are bridled and put behind a mount in Jebel el Kaf, جبل كاف, but as soon as the morning prayer of the Wakfê, وقفه, is said, they get loose, and rush to the houses in search of food after their thirty days' fast, and salt is strewed before the houses to prevent them from rushing in. Salt is holy.

King Solomon had power over the Jân, and with their assistance he built the walls of Jerusalem, Baalbek, &c. The king had been dead 40 years when the Jân discovered it.

The Jân intermarry with human creatures. Such people are always solitary. In some cases the Jân never quit human company. For instance, a man in my service, about 25 years old, would never stay out in the fields by night, because his Jânié, جانيه, regularly visits him, and he was very much afraid of her. He could never look at a woman and smile, for his Jânié was very jealous, and had several times thrown him on the ground. Another man in my service had beaten his wife; she fell on the fire hearth, and immediately the Jân took hold of her, and tried to entice her to follow him to Egypt, as there they could live openly together, whilst in the "Holy Land" that is not proper. A Jân one day stood in the way of a man, and would not let him pass. He three times told the Jân to go out of his way, but the Jân only repeated mockingly the words after the man, who then lifted his stick, نبط, and killed the Jân. A shoe was found into which the body of the Jân had turned, and all at once the Jân rushed at the murderer, and dragged him underground to the court of the Jân to be judged. At the inquiry the Jân told the Judge minutely what had happened, and the man was pronounced not guilty and released. As he was coming away he saw a washerwoman of the Jân, and poured out the water, for which he received a flogging, and was told never to pour out water without calling on the "Merciful," the same as when he quenches fire. When the man came again to earth he told everything, and these rules are strictly observed by the mass of the people. Many think the Jân to be Mohammedans, and believe they are under the Mohammedan law. Sidna Sa'ad el Anzar, سيدنا سعد الأنصار, buried in Beit Dejan, was killed by the Jân because he passed water on their heads through a fissure in the field. The women heard the Jân in the well say that he was killed for that.

The *Kird* (قرد) one day sat upon the shoulders of a man named Sa'adi, معاده, of Amwas, and did not leave him till he came to Kariet el 'Anab. When he arrived at the village he was dumb. The Khateb of Kariet ordered him to perspire and *read* the pain away, during seven days. He then recovered his speech, but remained a stammerer, and his children are all stammerers. This story is often repeated, and any very obtrusive fellow is said to be "like Abu Sa'adi's devil," زبي قرد ابو معاده. The Sheikh Abd-er-Rahman, of Yalo, is renowned for driving off devils. He did so once in Yalo, and once in Eshua (اشوع), where the devils had been stoning the inhabitants. There are many such sayings.

The *Mared*, مارد, is a tall spirit, generally appearing where someone has been killed.

The *Rassad*, رصد, is generally a guardian of some treasure, and is bound to no form. He may be a man, a colt, a cock, a chicken with young, &c. Almost all caves are haunted by the Rassad. In the mountains every curious stone and ruin has its guardian spirit, bound to keep the treasure for a fixed time—one, two, or more centuries. There are clever people, principally the Algerians, who know how to get them away. But it is also thought that Europeans looking for ruins or excavating have indicators, دلائل, and know exactly how to make the Rassad leave his grip of the treasure. An Algerian told a man in Safrié that a stone in his courtyard contained a treasure, but it could not be obtained unless with his wife's blood, so they both resolved to kill the woman by night. She had to prepare supper for them and caught a cock to kill; but, whilst passing over the stone in question, she cut her finger by accident, and some of her blood dropped on the stone, which opened, and the gold coins came forth. Of course her life was spared. Other concealed treasures are brought forth by food, by incense, &c.

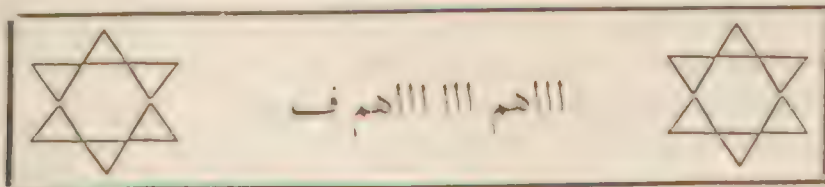
The *Karine* (قرينه) is a female spirit accompanying every woman, and has as many children as her companion. Some are good, some bad; some hate boys, some hate girls. The Karine is very dangerous to pregnant women, and to newly-married people. She acts principally on the genital organs, to destroy the procreative power of men and make women barren.

King Solomon was walking out one day and met a very singular-looking woman; he asked her, جان او أنس, "Jân or human?" She answered, "I am the Karine. I put hatred between husband and wife, I make women miscarry, I make them barren, I make men impotent. I make husbands love other men's wives, women other women's husbands; in short, I do all contrary to the happiness of conjugal life." The king

then asked her to leave off this wickedness for his sake, so she promised him to leave it off if people carry the following charm round their necks.

٢	١	٩	٥	٢	٦	٣
١	٩	٥	٢	٦	٣	٢
٩	٥	٢	٦	٣	٢	١
٥	٢	٦	٣	٢	١	٩
٢	٦	٣	٢	١	٩	٥
٦	٣	٢	١	٩	٥	٢
٣	٢	١	٩	٥	٢	٦

written on a paper, and sewed in a leather envelope. King Solomon took the copy and it was thus handed down. The Sheikh Muhamad e-Rafati of Danial, near Lydd, is well versed in this. He has a book about all such charms, and is very clever in making them. Solomon's seal keeps away all evil. This seal is copied from the Book of Charms :—



Question 4. *Have they any stories about Iblis (the Devil)?*—Two men were quarrelling. One of them said, *يا بليش*, "Shame on you, Satan!" (an expression very often used). The other said, "Satan is innocent here; it is you who quarrel." When they parted, Satan appeared, thanked the latter for having defended him, and invited him to go with him under the earth, which he did, and was kept there three days and three nights, getting the best of food, which the Devil brought from earth. In conversation Satan told his guest that the expression, "Shame on thee, Satan" does not grieve him, but if a man say, "May God curse Satan, a curse and a half, and the half of a quarter," *اللّٰه ينعى ابليس لعنه ونشف ونسف فرتوكه*, this makes him rage. The man now said this, and was suddenly put back upon earth.

The Devil one day sent his son with a flint stone to an assembly of honourable people, and told him to have the flint stone woven. The son came in and said: "My father sends his peace, and wishes to have this flint stone woven." A man with a "he-goat beard," *كوسه*, said: "Tell your father to have it spun and we'll weave it then." The son went back and told his father; the Devil was very angry, and told his son never to

put forth any suggestion when a *Kasa* (he-goat bearded) is present, for "he is more devilish (أشطن) than we." But the son excused himself, saying that the fellow was hidden under his mantle and he did not see him. The *Kusa* is considered as a very cunning fellow.

Question 5. *Have you seen them dance in honour of Welys, Nebys, or dead men?*—Only women dance in honour of Welys or Nebys, solemnly accompanied by the men on occasions of fulfilling a vow (ندر). The vow is made to the saint conditionally. In case of sickness or other distress a vow is made to the saint, of a sacrifice after recovery. The sacrifice, الذبيحة, a goat or sheep, is procured, with some ratels of rice; the relations and friends are invited; the women put on their best dresses, and the men are armed to shoot for joy. They go, for instance, to El-Khader (St. George's) of the Greeks, near Solomon's Pools, north-west of which there is a place of offering both for Mohammedans and Christians. The prior of the convent generally receives some piastres and a plate of rice and meat, and in return gives wood for the sacrifice. The animal is then killed in the court, the saucepans of the convent are taken for the cooking, and all the time the women dance and sing before the church door, the men occasionally shooting through the corridors. I have been many times with them. The time is not fixed when they fulfil a vow; many years may pass before they fulfil it; they generally do it on a Sunday. The wailers (نواعات) dance in circle round about, beating their faces and dishevelling their hair—of course, only women. One woman, "the beginner," بداية, says one line, and all the others say after her. This is considered very sinful, though they all do it—plains and mountains. The "beginner" is sure to go to hell, without mercy, الى جهنم من غير حساب. The "beginner" is paid in towns, but not among the fellahin. The following is an example of a song for a man:—

The Arab chief is sleeping

All covered with a blanket.

And when his sleep has sweetened

They tore their clothes for him.

The Arab chief is sleeping

With his garments all loose.

And when his sleep has sweetened

They tore their raiments for him.

شيخ العرب نائم

ومرخی الحرام عليه

لمنه حلي نوموا

قددن الثياب عليه

شيخ العرب نائم

ومرخی القيطين

لمنه حيلي نوموا

قددن القفطين.

For a woman, one example of song is :—

She's coming from her father's
house washed and tucked up

And fears to soil her feet from
the cemetery's dust.

She's coming from her father's
house washed and cleansed

And fears to soil her feet from
the manure-heap.

طلعت من دار ابوها غاسلة و مشمسة

خايفة على رجلها من عجاج المقبرة

طلعت من دار ابوها غاسلة و مغسلة

خايفة على رجلها من عجاج المزبله.

Question 6. *Have you ever seen them dance round trees or round a stone or poles, &c.?*—No.

Question 7. *Collect any stories you can about the Biât el Ghoul, &c.*—I know none in the plain, but north of Beit Nuba, at the promontory where Wâdy Budras and Wâdy Suleiman join, there is a number of large and small flint stones, irregularly distributed by nature, in the calcareous rocks of the district and very conspicuous. They are called the "Farde," *فردة*, wedding procession. Tradition makes the said procession to have passed there in the time of the ignorant, *جبال*. A woman was just putting her dough into the oven, and taking out baked loaves, when the procession passed. She quickly arose, and took up her child; but, finding it dirty, she wiped the child with a loaf of bread and threw the bread away, and went to look; but the sacredness of the bread made the whole procession, man and beast, turn into stones, which are still there, as a warning to after generations.

Question 8. *Why do they look for gold hidden in ruins?*—They believe rich people to have lived in such places, and to have left in time of war, hiding their valuables before going. During the Egyptian campaign of 1882 I know many people of Beit Jala who, fearing a general massacre of Christians, hid their money, the women their headdresses, &c. Very often money has been found in Dagoon, west of Beit Dejan. Two years ago the colonists of Rishon carried away a good many stones from the ruins and many coins. Also small earthenware pots with gold coins were found, and sold mostly to the Jews of Rishon. At Nâ'aneh they found a golden lamp. Such events encourage them. They suppose that all these ruins have treasures, which are kept by the Rassad for a given number of years, and these past they can be found easily.

Question 9. *Give any stories about Iskander, 'Amr, the Nasâra, &c.*—When the Khalif 'Omar came to Palestine his horse stamped on the ground, and by its simple neighing the Nasâra of the mountains of Judea became Mohammedans without bloodshedding. This happened in the plain of Philistia, and the plain to Ramleh is still called the Fattuh, *فتوح*, on account of having opened to Islam before all other provinces.

Question 10. *Give any stories about Queen Belkîs, &c.*—Queen Belkîs is celebrated for her beauty. The stories of the Zûr, in which the Sultan asks Jaleely, the bride of Kleebeh, in marriage, and in which the Sultan is killed for Jaleely's sake, is a very popular and long story, partly in prose and partly in verse, which is sung and said by the bards during the long winter evenings. The story of Abu Zède, another hero of the Beni-Halal (بنى هلال), describing the exodus of the tribe from Najjîd, in Arabia, their passage through Palestine, their war with the Christian Queen Martha of Jerusalem, and the final settlement in Tunis. A very interesting feature in all their wars is the choosing of a woman عمرية to take the part of the opponent in their duels, as in the passage:—

O, girl, cover your lips.

Don't think, for I have
plenty of beauties.

If I would want, I would
take from our country.

I have pocket perfume,
Abu Abî's daughter.

She makes one break the
fast in Ramadan.

Go for them; the dust goes
with them in procession.

The Angel of Death floats
about the heads.

يا بنت دبنى على المباسم
ولا تحسبيني الى الزين عاتم
وان كان بدى ملهوا كان هويت بلادنا
وعندي عثر الجيب بنت ابو علي
تفطر في رمضان من كان صائم
عليهم عليهم والعجاج يزفهم
ويبتا ملاك الموت على الراس حاتم

(A tribe of the Beni-Halal has come back to Palestine in 1889 A.D., and settled beyond Jordan. The Mohammedans take this as a sign of the approach of the Judgment Day.) As Jaleely, in the story of Zûr, so Jaziéh, in the story of the Beni-Halal, is the female hero of the tale, and surpasses imagination in beauty.

Every time, before two champions fight, the bard says:—

They both meet, like two moun-
tains.

Their time is come to them.

And the unlucky raven calls
above their heads.

وبنزلال لثنين . كما جبلين
وبجن عليهم الحين
وبزق على روسهم غراب الدين

It is wonderful how much these people, not the bards only, know by heart.

Question 11. *Do they lay sick men on stones supposed to be Holy, &c.?*—They do in some cases in the mountains make the sick sit down where a Wely was seated. Tiberias hot-springs are warmed by the Jân, and cure many sicknesses.

Question 12. *Do they ever give the weight of a child's hair or a man's hair to the poor when it is shaved?*—The weight of a child's hair is vowed to the poor in silver money. During the period the hair is uncut it is unnecessary to put any kind of amulet on the child, for the shrine or holy man to whom it is vowed preserves the child till he receives his right. If the hair happens to grow in the eyes, it is cut away and put aside to be weighed with the other. They leave it thus one, two or more years, and on a feast day, at Jerusalem on the Neby Mūsa Feast, or at Rubīn in September, the money is either distributed among the poor then present there, or some candles, oil, &c., is bought and put into the Makām. A sacrifice is also brought and eaten by the family and relations at the shrine. In the Gaza district they make a bracelet of this hair when weighed, and put it on the arm or leg of the child as an amulet.

Question 13. *Do they believe in the Evil Eye?*—Universally. The Eye has great power. It throws down a house, breaks a plough, makes sick and kills persons, animals, and plants. The easiest cure for the stroke of the Evil Eye is to take a bit of clothing of the person that has the bad quality, a rag, &c., and burn it below the person struck. The fumes of the rag immediately take away the evil effect. Another method is to place a piece of alum, salt, incense, and a piece of tamarisk wood for Mohammedans, a piece of palm from Palm Sunday for Christians, in a pan on the fire, and take the child round it *seven* times; as soon as something cracks in the pan the effect is broken. But here also prevention is better than cure, and to avoid the Evil Eye blue beads are put round the necks of children and animals, together with alum, and always God is mentioned—simply ذكر الله, or “I encompass you with God,” حواتك جلاله, before praising a child, animal, &c. Also when mentioning them, always say “Evil out,” بئرا الشر, or “May no evil touch him,” من غير شر لا يسيبوا. Certain persons are notorious for having the Evil Eye, they are always such as have blue or light-coloured eyes, and this is why the *blue bead* is worn as a counter effect. A man of Beit Mahsir is so bad that he can throw down a carriage on the Jaffa road, simply by his eye; many people of his village told me so, and they strictly believe this. An old man in Urtas was so dreaded that, time and again, in my presence, they would go out of his way. He could dry up a field of beans, &c. The belief in the Evil Eye is certainly very strong among all classes of the population—Christian and Mohammedan, Jew and Gentile. It is stronger than religion.

Question 14. *Do they believe men can be changed into beasts and birds by enchantment, or turned into stone?*—They think this can be done by sorcery for a short time, but not for ever. The above-mentioned marriage procession was turned into stone, but since the appearance of Mohammed, من حد ما زهر نبينا, nobody was ever turned into

stone, though some beings are vaguely believed to have been cursed, as the Warran, ورن (Psammosaurus scincus), found in the plain of Philistia, which is a human being, condemned to that form of existence. The Egyptian Eagle-owl, حوى, of the Fellahin, and ام قرس, of the Beduin, is an enchanted woman, and is very bad at child-birth, the name of the child and the bird must not be mentioned within a few days of the birth, as the sorceress (the owl) would take the child.

Question 15. *Give all you know about the Fellah ideas of good and bad luck, according to the way a horse's hair grows, &c.*—The Fellahin generally refer to the Beduin for the horse's colour and signs. A few rules they know, as that a chestnut horse must have both hind legs white, or at least the left one. The right alone is not good. For other-coloured horses it matters little. The way the hair grows at the neck indicates a spear or a dagger to kill its owner; if it burrows it is of bad augury. My brother Willy's horse made a grave, and this is believed to have caused the accident of which my brother died. (He was drowned.)

Question 17. *Are fires lighted on the hills in Autumn on certain days?*—Nothing is known of such a custom in this district. Torches only are lit, مشاعل, and carried by women on any occasion of rejoicing.

The Lebanon Christians light fires at the Feast of the Cross, in token of St. Helena's finding the true Cross, and making known the news to her son in Constantinople by fires on the towers all the way to Constantinople.

Question 18. *Do you know any ponds of sacred fish besides those of Acre and Tripoli?*—None.

Question 19. *Are pigeons, owls, &c., held sacred?*—1. The White-bellied Swift (Cypselus) and Common Swift, وصذونو, is the most sacred of birds, as it visits the Kaaba seven times a year. It is considered lucky to have their nests in a house.

2. The Pelican, حوصل و بجمه و ابو جراب, brought water in its pouch when it was wanting at the building of the Kaaba, and is therefore sacred.

3. The Crested Lark, قندرا (Alauda cristata), points with its crest towards God. تشهد it witnesses, and every morning praises, بتصبح.

4. The Palm Turtle Dove (Turtur senegalensis) says يا قريم.

5. The Collared Turtle (Turtur risorius) says با جوختي.

6. The Turtle Dove (Turtur communis), سنتى و رفتي, wept for

Mohammed when he left Jerusalem for Heaven. It nestles about the Haram in the cypress trees and on the Aksa. The Christians also consider it sacred. The red feathers are stained by the blood of Christ, in which it wallowed at the foot of the Cross.

7. The Hoopoe (*Upupa epops*), *هدد*, had a golden crown in former times, but was hunted for it, and so asked King Solomon to take it away, which he did, granting the bird a crown of feathers, and making it King of the Birds. *شاویش الطيور او ملك الطيور*.

8. The Southern Little Owl (*Athene glaux*), *کوکا*, was sent by King Solomon to bring the most beautiful of all birds. She brought her young, whereupon the king was wroth, and sent her to the desert to live, and cursed her; but before she left he said, "God himself shall provide daily for thy food." She now receives every day a bird, sent by God to her hole, and is therefore considered sacred.

Question 20. *Is it usual among them to turn their money at the new moon, &c.?*—They turn a majidi towards the moon, that the month may be "white" towards them, and say: "God came and your crescent (appeared)" *هل الله وهل هلالك*: "May'st thou be a blessed month (lunar) to us" *ياريتك علينا هلال مبارك*: and in some places they add to the above: "We break a stick in the eye of the envious (when a husband has two wives, for instance, and one envies the other)" *قسفنا في عين الجصود عود*: "May'st thou endow us with happy nights" (in the sense of Genesis xxx, 14-16) *باريتك علينا من ليال السعود*. This last expression is used by women, and they break a small stick whilst saying it.

For good luck during the month, look at the face of the person you like best directly after seeing the crescent.

Money is put between the dishes at the supper of the last day of the year in order to have always plenty.

Question 21. *Are crows and other black birds considered unlucky, &c.?*—The Raven (*Corvus corax*), *غراب*, was cursed by Noah for having settled on a carcase when he set him free from the ark. Noah told him: "May God blacken thy face" *الله يشود وجهك*. If mischief befalls anybody, they say: "The Raven of unluck (mishap) came upon us" *هل علينا غراب البين*. In the morning the Hooded Crow (*Corvus corax*), *غراب نوحى*, is unlucky; he says: "He first roused you on your beak" *فالك على مذكارك*.

The Lapwing (*Vanellus vulgaris*), *قنط*, the Gazelle, and the Scorpion (*Buthus occitanus*), *عقربة*, are unlucky in the morning.

The Barn Owl (*Strix flammea*), بومى بيضه, is unlucky when she calls in or near a house. A curse is : البومة تزعك في دار البعيد May the owl call in the house of "the remote," بعيد ; "remote" is often used as a term of disdain for a person.

The Stellio Lizard, حرذون, is not unlucky, but accursed. At the flight of Mohammed it was standing above the cave, over which a spider had put its web, and said, wagging his head, "He is inside ! he is inside !"

The Gecko (*Ptyodactylus hasselquisti*), أبو بريص, also, when the Prophet hid in the earth, said : جك . والنبي في الشك Chic ! (his call) the Prophet is in the cleft."

The Mule, بغلة, is stricken with barrenness, for having carried up the wood to Jebel Arafât for the enemies of Mohammed.

The Lizard (*Lacerta agilis*), سحلية, poured water, which she carried in her mouth, on the wood to quench the fire with which they burned the Angel Gabriel. She is blessed.

Question 22. *Are persons supposed to be bewitched by Jân, &c. ?* — Yes, some are possessed by Jân, and they are the *mijnoon*, مجنون, or *mijaneen*, the Jân or Jânié (female) takes possession of the person, and is very difficult to be driven out again. Certain sheikhs are very clever in doing so. Many instances are given.

On the 31st December, 1891, a woman living next field to ours in Jaffa was seized by a man wrapped in white, and with a pointed cap on. She was struck dumb by terror, and ran into the house, but could show only by signs that something extraordinary had happened. Immediately a sheikh from Saknet Abu Darwish near by, was fetched, who brought his sacred books—ghost-books—and to begin with administered a severe flogging to the patient, then, burning incense all the time, he began questioning :—

SHEIKH. Who art thou ?

GHOST. (*Out of the woman.*) A Jew.

SH. How cam'st thou hither ?

GH. I was killed on the spot.

SH. Where art thou come from ?

GH. I am from Nâblus.

SH. When wast thou killed ?

GH. Twelve years ago.

SH. Come forth of this woman !

GH. I will not.

SH. I have fire here and will burn thee.

GH. Where shall I go out ?

SH. From the little toe.

GH. I would like to come out by the eye, by the nose, &c.

After long disputing the ghost, with a terrible shake of the body and of the leg, fled by the toe ; the exhausted woman lay down and recovered her language. An amulet was then written and put in a small leather bag, which was well waxed with beeswax, through which the Jân cannot penetrate.

Another person possessed by a Wely is the Sheikh Mahmoud es Sattel, a man who read very much in the Koran. All of a sudden the Sheikh el Shazili, who is buried in Acca, seized him. He threw away his clothes, ran about naked in his garden, beating his wife and relatives, and making a dreadful noise. He never touched me when I was passing there, but always greeted me very politely, as before. At length he went to Acca, and was initiated into the Order of the Shazili, and wears the green turban since. He had an attack of insanity in Acca, and was a fortnight naked in the neighbourhood, after which he was received. I could not get the full particulars of this case. The sheikh came back in 1887, and has been quiet since, reading all day, and saluting when anyone salutes him first. He has had no more attacks of mania, and his complaint seems to concentrate itself in his holiness. His turban grows occasionally, by his putting a new one over the old. He carries a small spear, and since October, 1891, goes to the top of his house, about 2 kilometres away from town in the orange gardens, and calls out the regular hours for prayer, sometimes prolonging the morning call, *أذان*, to half an hour. (The reward for the Mueddin in Paradise will be that his neck will become as long as a camel's neck.)

El-Khadr, St. George's Church, near Solomon's Pool, is a Christian (Greek) lunatic asylum, and accepted as healing by St. George's power, both by Christians and Mohammedans, as is Mar Imtanoos, *مار اعطانوس*, a convent near Sidon. At a Maronite convent in Lebanon, the saint is also held in great veneration by Moslems, Metaweleh, and Christians. The monks there sell a wire necklace, which prevents the Jân from taking possession of a person. In the northern district (Syria and Northern Palestine) bewitched persons must pass over the sea, merely to pass in a boat is sufficient, to get rid of the Jân.

The Sheikh Khaleel el Natûr of Yazur is very clever in driving out Jân. But in a recent case he bade the father of the girl to keep the thing secret, and tell no man, as he feared too much meddling with the Jân might prove fatal to him. The patient, when recovered, must keep away from burial grounds and mourning processions or dances, as the Jân on such occasions easily takes possession again.

Question 23. *Why are ploughs and other valuables left inside a Makam, &c. ?*—The Makams are very often in an uninhabited place on the site of some old ruin as the Sheikh 'Ali el Jedireh, 2 kilometres west of Latrûn or Beit Iskârieh, south of Nehalîn ; or the *Hoobanah*, a place near Beit 'Allar el Fokah. The people after having ploughed put the ploughs inside the Makam in the evening, and find them in the morning

near the place where they are working, and thus save themselves the trouble of carrying them to and fro. Should anyone venture to steal them the Wely will defend such things when put in his charge. The Hoobaneh is a very angry saint, and punishes immediately anyone taking away even as much as a piece of wood from the forest or bushes round him. Zachariah, the Prophet of Beit Iskârieh, on one occasion struck with blindness a man who had taken straw from the Makam, so that he could not find his way out of the place until he had given the straw back. The Ajami, عجمي, at Beit Mahsir, is very jealous. A man there took a piece of wood from the Makam to mend his plough, and said, "If you really guard your wood show me a sign." On coming home the man found that a cow belonging to him had cast a calf, and he has since believed in the power of the "Ajami."

Question 24. *Is there any custom of throwing bread into spring water?*—In Gaza they have a custom of throwing bread into the sea as an offering or vow, نذر, to the inhabitants of the sea.

Question 25. *Why are eggs tied to the walls of houses?*—The egg is tied as a charm, being symbolical, as it is closed up hermetically; the eye cannot touch it in any part.

Question 26. *Why is blue considered a lucky colour, &c?*—Because blue annihilates the effect of the Evil Eye. Blue beads are tied to the hair of young children, or hung on the necks of children and animals. The blue bead attracts the blue eyes, which are very bad.

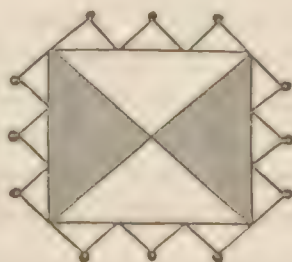
Question 27. *Describe the village Kabbeh or Makam, &c.*—Lamps, candles, oil, &c., are put into the Makam, and lit on Thursday night by the servant of the Wely. These offerings are vowed for the cure of some person.

Question 28. *Do they make marks on the walls and doors of houses for good luck, &c.?*—At Beit Dejan I copied the following marks or drawings with which the houses are ornamented. The woman of the house generally paints them in whitewash. I was given the following signification:—

قرس عسل



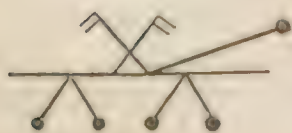
Honey-comb.



Moon, قمر



Palm-tree, نخله






Horse, حصان


Arches, اقواس



They also very often print hands on the doors, by dipping their own into whitewash, and pressing them against the door. They very often mark with henna at the feasts the door-posts of the Makam or Wely with

this sign, , but very irregularly, and generally call it, نخل,

palm. They also mark  or . In Saris several houses have Solomon's

seal above the doors or windows, hewn in stone, . Here in

Jaffa it is often seen tacked in lace on the collins of Mohammedans.

Question 29. *Do they write anything on the walls to keep away ghouls, &c.?*—No ; ghouls are passed into mythology.

Question 30. *Why are small hollows scooped in the top of the tombs so as to hold water ?*—In very few places the Fellahin have tombstones. At Kuriet el 'Anab they have some, but consider themselves townspeople. The hollows are for the gathering of rainwater for the souls of the departed to drink.

Question 31. *Why are charms worn round the neck, &c.?*—Charms are worn round the neck or on any part of the body for very different causes and of different materials. Thus the vertebra of a wolf is tied to the neck of a child, against the whooping-cough ; a blue bead and alum against the Evil Eye. Written charms enclosed in leather guard against fever, against Jân, against shot, in short, against every evil that may befall a person. Men generally have the charm, حجاب, put in the cap. Some are made by sheikhs. Jews are believed to be very clever in making certain charms, also Algerians, and other North Africans. Some are bought in the market.

Question 32. *Do you know any cases of magical ceremonies, &c.?*—In the plain, to find out a theft, the sorcerer, ساحر, brings a man with the name of Ahmed Muhammed, binds a towel round his head and makes him look through into a basin of water. He then produces his magical books, burns incense, and having thus gathered the Jân together, asks, through Ahmed, three times, where the stolen objects are put, and so forth.

On one occasion, in Urtas, many years ago, three sheikhs from the Hebron district were brought, one of them with long hair seemed the leader. They gathered all the Urtas people together on a house-top, had the place well swept, and burned incense, reading in a book. A young girl (before puberty) was set down in the middle and some ink put in the hollow of her hand ; she had to look into this and never look up, whilst she was examined.

THE CONJUROR. What do you see ?

GIRL. A man sweeping.

C. What next ?

G. A second man sweeping.

C. What do they do now ?

G. They are sprinkling water.

C. What now ?

G. They are putting up a tent.

C. Are they many ?

G. They are now coming in with arms and spears.

C. What is now going on ?

G. They put chairs right and left of the tent.

C. (*aside.*) These chairs are for the Viziers.

After reading for a while and finding the Sultan to be very long in appearing, he examined over and over again, and at length said : " It is Thursday afternoon ; they are at their religious duties." So they put everything away, and next day began again. Finally the thief, in secret, asked the sheikhs to do away with this mode of investigation and promised to pay everything. So this case was not brought to an end by the Jân, for the man declared himself guilty, and as far as I can learn it almost always ends in this way.

Question 33. *Do they interpret dreams, &c.?*—Yes. They have books for the purpose ; generally the خطيب, or Imâm, has these books. But some are renowned as the شيخ محمد الرفاتي. To dream of dead persons is a sign they want a prayer said for their souls.

Question 34. *Have they ever processions carrying boats or models of ships.*—I have never heard of this in Palestine. The processions that they have here in Jaffa for want of rain generally take place in the evenings. They have white flags, drums, and cymbals and go about the gardens ; but, as a rule, they think it wicked to do so. " God knows better what he has to do." When desiring rain they in some mountain villages ride wrongside on a donkey, grind a mill (to provoke thunder), pour water (to provoke rain). But it is considered sinful, as one day, says the legend, the children of Israel murmured at Moses and told him to pray to God to let them have rain and sunshine, as they liked it ; so God allowed them to do so. Whenever they asked for rain it rained, when for sunshine the sun shone. The fields were beautiful, the ears of corn a span long ; but when they threshed them they were empty, and they had famine. So Moses prayed to God, and God told him to tell the people to plant Gourds (*Cucurbita Pepo*). They did so, and the plants grew very quickly. Those that planted plenty had plenty, those that planted few had few. When they opened the gourds they found them filled with big kernels of wheat, and God told them never again to interfere with his works. He knew best what he did, as he proved

by putting wheat into the gourds. Since that time nobody ought to pray for rain or for fair weather.

Question 35. *Give legends about Nebys and Welys, &c.*—In all wars against the Christians, the Welys are supposed to war against the infidels. The mare of Sheikh Ibrahim abu Rubaah, of Jaffa, was absent one day from the stable. His son came running, telling him the mare was stolen. But the old sheikh shook his head and told his son to be quiet, the mare would appear again. Three days afterwards the animal was found tied to a tree near Yazûr. On inquiry the father revealed to them that the mare had been warring against the Russians (this was in 1877). Many of the people of the plain saw falcons (they were disguised Welys) swallowing the Russian bullets as they were projected from the guns. There were many Welys fighting against the Russians. A Derwish in Safed used to bring felt hats, and said he got them every night in war with the Russians, but on further inquiry it was found he had taken them from the Jews in Tiberias. 'Omar-Ibu-Khattah appeared several times to the people of Urtas, like all such holy men, riding on a white mare with a spear, a green mantle and turban, and long white beard. They generally appear to rebuke the people for ploughing in their lands (the Wely's). The 'Ajami of Beit Mahsir, whose lands were mixed with the village lands, killed several animals which were on his lands. The people thought it was enemies who did it, and one evening they hid themselves, and saw the rider, as above described. He asked them what they wanted, and they told him: "If thou art the 'Ajami, show us thy lands." The next morning he had shown them by a boundary line all round his lands, and since then nobody interferes with his grounds. A camel which was feeding on an olive tree was found hanged between its branches; and at another time a jackal was found standing dead with a candle in its mouth at the door of the Makam. Thus the 'Ajami punishes man and beast for going on, or taking anything from, his grounds. Legends of Welys are very plentiful.

NARRATIVE OF AN EXPEDITION TO LEBANON, ANTI-LEBANON AND DAMASCUS.

By Rev. GEORGE E. POST, M.A., M.D., F.L.S.

THE only elaborate map of Lebanon, Coelesyria, and Hermon which we possess is the *Carte du Liban du Corps Expeditionnaire de Syrie*, published in 1860-1861. This map is far from correct in its topography, and very erroneous in its transliteration of Arabic names—the part of the Anti-Libanus which it covers is so incorrect as to be almost useless. The journey of which the present is a narrative was undertaken by Professor West and myself with a view to collecting the data necessary for making

a correct map of both chains, to be continuous in scale and style of execution with the map of the Palestine Exploration Fund, as well as for the further exploration of the botany and geology of these most interesting chains.

Professor West commenced his work from Qarnat-'Aqurah, a most commanding peak overlooking a large part of the rugged spurs of the maritime face of Lebanon, between the latitude of Beirut and Tripoli. He took bearings from this point of all the peaks to be seen. He then pursued his journey through the wildest part of the Jurd-'Aqûrah to the Cedars, taking observations as he went. From the Cedars he ascended the highest regions of Lebanon, and took an elaborate series of angles from all the principal summits as far as el-Qarnet-es-Sauda. He then came over the top through the Wadi-en-Najâs to Sir, in the Dûnniyeh, where the writer joined him on the 20th of July.

The road from Tripoli to Sir passes through the gap between Jebel-Turbul and Lebanon, then over a spur covered with scrubs of oak, arbutus, myrtle, juniper, and maple, into a grand amphitheatre, the background of which is the cliff called Rijl-el Qal'ah, which towers over the Neba'-es-Sikkar (the Sugar Fountain).

Tuesday, July 21.—We made our arrangements to spend two nights and two days at Merj-Hîn, in the heart of northern Lebanon. Our road lay up through the village to the base of the cliff, along which we rode for two hours to Neba'-es-Sikkar, a fine fountain at the base of the highest portion of the cliff, which can hardly be less than 1,200 feet high. The temperature of the water of this fountain is 42° F. Its sparkling waters flow in a series of cascades and rapids 4,000 feet into the ravine below.

From Neba'-es-Sikkar we passed over an easy road, for an hour and a half, to Sikr-Ibrîsah, where is a spring of cool water and a small meadow.

The day before, Professor West had found large numbers of cedars at the head of the Wadi-en-Najâs, above Sir, at a height of about 6,000 feet. We found them in considerable numbers between Sir and Neba'-es-Sikkar, and I afterwards found them in the forest toward Wadi-Jehennam. I did not find them in the upper regions of the 'Akkar forest below the Jebel-el-Abiad. The people of these parts call them Tanûb [تنوب].

Thus within a small area the cedar has three names, the Arz, its proper designation, the Ibhûl, name near Barûk and el-Ma'âsir, and the Tanûb, in the Dûnniyeh and 'Akkar.

Passing over a shoulder to the right, we saw spread out about 800 feet below us the broad fertile plain of Merj-Hîn, about four miles long, by half to three quarters of a mile broad. At either end of this plain is a copious fountain; the temperature of Râs-el-'Ain, the southern fountain, which is much the larger of the two, is 49° F. That of 'Ain-el-Jamî, the northern fountain, is somewhat higher.

All the afternoon we were passing along the flank of Lebanon, at an altitude of from 4,000 to 5,000 feet above the sea. Below us lay the grand forest region of the Dûnniyeh. It consists of an intricate series of

the most rugged gorges, belonging to the upper waters of the Nahr-el-Bârid. The almost perpendicular sides of these gorges are clothed to their rocky tops with large trees. The most characteristic of the trees of the Dummieh, from 4,500 to 6,500 feet, is *Abies Cilicica* [شوح], of the shape and mode of growth of which the subjoined cut, taken from a photograph, give an excellent idea.



ABIES CILICIA.

This tree grows to a height of 60 feet, and in the denser forest region its form is cylindrical. In the more open groves it is elongated-conical, as in the cut. The cones are cylindrical, and about five to six inches long, and one and a quarter to one and a half broad. The following cut shows the shape of the top of one of these trees with its erect cones.

In a wheat field, a few hundred feet to the right of the road, half an hour before reaching el-Merj-et-Tawil, I found *Charophyllum Aurantiacum*,

Post, a new species, and in the woods to the left, *Ribes Orientale*, Poir., the wild currant of Lebanon.

From 5,000 to 6,500 feet grows the cedar of Lebanon. From 3,500 to 8,800 feet the sturdy *Juniperus excelsa*, the *Lizab* of the Arabs, defies alike the rigor of the elements and the stupid vandalism of man. It is safe to say that there is not a single perfect tree of this species in the whole of northern Lebanon and Anti-Lebanon, perhaps nowhere in Syria. Instead of cutting down a tree and splitting it up for fuel or charcoal, the



TOP OF ABIES CILICIA, SHOWING CONES.

woodmen hack and lop the branches and mutilate the trees into most shapeless forms, often cut deeply into their base, with no apparent object save destruction, bark the trunk, set fire to single trees, often to whole forests. The lopped trunks are twisted, gnarled, scathed, peeled, often assuming forms of Laocoönian agony. Nevertheless, neither the lightning bolt, the incendiary torch, nor the ruthless axe have as yet been able to extirpate this tree of iron constitution. It grows far above the snow-line. Forests of dead, mutilated trees cover whole mountain sides. In many

instances a single branch is doing its best to maintain the life of the tree by putting forth a bunch of twigs, until some wanton woodman, apparently out of mere spite, lops it off, and extinguishes the last spark of life. Yet these gaunt dead forests do not rot, and their skeletons cover the mountains, a sad reminder of the improvidence of the people which has desolated the ill-fated East.

At the levels below 5,000 feet, flourish the evergreen oak (*Quercus coccifera*), and a deciduous-leaved species (*Q. Cerris*). From 2,000 to 6,000 feet, *Prunus ursina* (*khaukh-el-Dib*), and *Juniperus oxycedrus* (*Abu-Kuleil* and *Abu-Lauz*). Below 4,000 feet, *Pistacia Terebinthus* (*Batm*) and *Pinus Halepensis* (*Suobar* and *Ibhal*). Of shrubs, often with the magnitude of trees, we have *Lonicera nummularifolia*, *Styrac officinale*, *Berberis Cretica*, *Cotoneaster nummularia*, *Crataegus monogyna*, and *Ribes Orientalis*, and others.

Arrived at Merj-Iîn we encamped on a gravelly bank, about 50 feet above the northern fountain.

Horses are a fundamental consideration in an oriental journey. Their mishaps and infirmities do much to impede and thwart the best laid plans. Professor West's fine charger died suddenly the day before he had intended to start, and so, besides the loss of a valuable animal, put back his journey three days. Another horse gave out at Sir, and had to be traded off for a very inferior animal, with a bonus to boot.

Half an hour after leaving Neba'-es-Sikkar, another horse overreached and went lame. A little farther on he tore off one of his shoes, and went still more lame. With great difficulty we had him led to our camp at Merj-Iîn, in the hope that a rest of two nights and a day there would make all right. But he grew no better, and, on the third morning, we were obliged to send him back to his owner at Tripoli.

Wednesday, July 22.—At 8 a.m., after a cold night, we started up the Wadi-es-Sifsâf, toward the northernmost peak of the Zohr-el-Qodîb, which is known as Rijâl-el-'asherah. The Wadi-es-Sifsâf (Valley of the Willow), owes its name to a few willows on the shelving hillside, halfway up the valley on the left side of the road, going up. The trend of the valley is W.S.W. Just below the willows we found *Tragopogon baphthalmoides*, Boiss. var. *humile*, Boiss. At a height of 6,750 feet, in a basin of the same excavation as Wadi-es-Sifsâf, but without an outlet, we came upon Merj-Buşwayeh, a meadow about half-a-mile long and a quarter wide, in the middle of which is a shallow pool of water fed by a perennial spring; 250 feet above this meadow, on the right slope of the valley, is the ruined village of Buşwayeh, the highest ruin of dwelling houses in Lebanon or Anti-Lebanon. A description of this ruin, with plans of a rock-hewn tomb and a cover of a sarcophagus, was given in the *Quarterly Statement* for October, 1891.

An hour and a half from Buşwayeh we reached the twin mamillary projections of Rijâl-el-'asherah, 9,500 feet above the sea. After taking our observations of altitude, and angles for cartographic purposes, we lunched by a snowdrift, in the shadow of the rocks, at the base of which

was a pool of water. We tested the temperature of the water in the small pools just below the drift, and found it 43° F., one degree higher than that of the Neba'-es-Sikkar. The view from this point is very fine, especially to the north, where it takes in the whole valley of the Orontes and the Hems plateau, with the distant ranges of the Jebel-el-Bâridi and Jebel-Bil'as. It overlooks also a large part of the rugged forest region of the Dummīyeh and 'Akkar, and the Jebel-el-abiad, the last outlier of the Lebanon chain.

From Rijâl-el-'asherah we rode to the shoulder overlooking Sikr-Ibrîsah. On the face of the cliff overlooking Wadi-'Ain-el-beîda I found a *Juniperus excelsa* at an altitude of 8,800 feet. This is the highest station at which I have observed this hardy tree. In the gravel at the top I found *Allium Makmelianum*, Post, a very pretty new species; also *Erysimum Libanoticum*, Post, another new species; also *Æthionema oppositifolium*, Labill., *Euphorbia caudiculosa*, Boiss., and *Autrania pulchella*, Winkler et Barbey, a plant of a new genus, named after Monsieur Eugène Autran, the modest but indefatigable curator of the Herbarium Boissier, at Geneva. Full drawings of this species, exhibiting the minutest details of its structure, are given in Fasc. IV, Plantae Postianæ. In addition to the above we found among the rocks a specimen of *Podanthum virgatum*, Labill., as usual much eaten by the goats, and specimens of *Festuca ocina*, L., 2 *pinifolia*, Hackel, and another species of *Festuca*.

From this shoulder is gained the best view of the sombre Wadi-Jehennam, and its branch valleys. Mr. Crawford discharged his shotgun on this summit. The unwonted sound disturbed a distant encampment of Arabs, and it was amusing to watch the shepherds gathering in from all sides as if a signal gun had been fired, and they must be ready for a fight. We concluded, before giving them the meaning of our shot, to plunge down the steep side of the mountain to the Wadi-'Ain-el-beîda. We led our horses down the gravelly slope, and then rode up to the 'Ain-el-beîda, past Buṣwayeh, and then by a short cut over to our camp at Merj-Iîn.

Thursday, July 23.—I accompanied the groom who was leading the lame horse back to Tripoli, past some Arab encampments, at el-Merj-et-Ṭawîl, and then struck across the upper forest region to el-Jebel-el-abiad which I ascended. The view from the southern peak is very fine. I had not time to go to the northern, from which a view in perspective can be obtained of the Nusairi chain. Professor West conducted the rest of the party to el-Funeidiq, a village 3,800 feet above the sea, on the lower ranges of the 'Akkâr mountains. I struck across the lizzab and spruce forests to the same point.

Friday, July 24.—Funeidiq and Mishmish are twin villages, inhabited by a very ignorant and fanatical population. We were not sorry to leave their neighbourhood. On our way eastward, Professor West ascended el-Jebel-el-abiad, and took observations of height and bearings on several points of cartographical importance. The height of the highest peak by

his measurements was 7,200 feet. I struck across the spruce forest, and we photographed the trees above delineated. We had all appointed to meet at the 'Ain-el-Jami' for lunch. The two parties arrived within five minutes of each other.

We took our lunch under a lizzâb tree, on the slope, north-east of Merj-Ilîn. The view over the Merj and the great mountain mass was extremely fine. The meadow was dotted all over with flocks and herds, and formed a charming contrast to the sober grey of the hills.

There are several ruins in the hills about Merj-Ilîn. One is called Kharbet-Jami'. It consists of the remains of a comparatively modern village of rounded, unhewn stones, and is only of interest as indicating a recent occupancy. On the flank of the left side of the Merj, going north, about two-thirds of the distance from the southern end, a fellah told me that there was a spot called Ard-el-Ilîma [ارض الحمى], or Shir-es-Siwân [شير الصيوان], where there is some masonry, and an old conduit. I did not see them. He also told me that in the eastern mountain mass, that shuts in the Merj, was an ancient ruin, called Kharâb-el-Ilâtîm [خراب الحاتم], with hewn stone and sculpture. Also another small ruin called Qarnet-er-Ruweis [قرنة الرويس]. I did not find time to visit any of these ruins.

After lunch we passed the divide between Merj-Ilîn and Coelesyria. Our way lay at first through wadies between rolling hills, covered with phantom lizzâb forests. Among these wadies we encountered several groups of charcoal burners, and one kiln, where the woodmen were extracting tar from the wood of the *Juniperus oxycedrus*, called by them *Abu-Jauz* [أبو جوز]. After an hour of this scenery we turned to the right over a shoulder, and then into a beautiful park-like wadi, Wadi-Ibrisah, opening out N.N.E. to the Coelesyria and Hems plateaus. Immediately the Flora changed, and the plants of Coelesyria and Anti-Lebanon plateaus replaced those of Lebanon. *Pimpinella corymbosa*, Boiss., *Postia lanuginosa*, Boiss. (new for Lebanon), at a height of 3,200 feet, *Jurinea Stahelina*, D.C., *Verbascum Alicia*, Post (a new species), and a dozen other species not found on the maritime face of Lebanon. The trees of this region grow in open, park-like order, and are mostly young, and not hacked and hewn as those of the upper slopes. I noted *Juniperus oxycedrus*, L., *J. excelsa*, M.B., *Quercus coccifera*, L., *Q. Cerris*, L., *Pistacia Terebinthus*, L., *Acer Monspessulanum*, Boiss., *Prunus ursina*, Koch, *Lonicera nummularifolia*, J. et Sp., *Phillyrea media*, L., *Cotoneaster nummularia*, F. et M., *Berberis Cretica*, L.

Through the spreading gates of the valley we could see the boundless plain, now scorched by the heat of the midsummer's sun. Through the middle of the foreground the green line of the Orontes could be traced past Riblah, where Nebuchadnezzar put out Zedekiah's eyes, obliquely across the Plain of Coelesyria, to near Quseir, then back again to the Lake of

Hems. Except along the river, and where the irrigated gardens of the towns relieve the eye, all is sterile and forbidding at this season. The range of Anti-Lebanon, although broken in outline at this point, is of a uniform dun colour, unrelieved even by the scrubs which mitigate the barrenness of the slopes of Lebanon. We afterwards found trees in the wadies and the interior mountains, as will be seen in due course.

Turning round the shoulder at the right side of the valley, we passed for half an hour across a stony spur to el-Hurmul. This village is supplied by a number of fountains, the principal of which is Ras-el-Mâl, the water of which is carried by an aqueduct round the village, and distributed through it and the adjacent gardens far out on the plain. We encamped near the aqueduct, south of the village. The water at the fountain had a temperature of 52° F.

Saturday, July 25.—We left el-Hurmul at a quarter before 8 a.m. for the fountain of the Orontes, about an hour and a half away. The road was stony and uninteresting, and the descent to the fountain unspeakable. A turbid stream, Neba'-el-Fikeh, having its rise on the opposite side of the plain, rushes down into the cleft of the upper fountain. The upper fountain itself breaks out, not from the mountain side of the gorge, as might have been expected, but on the side of the plain. It consists of a semi-circular basin, with walls only a few feet higher than the river bed. Around this basin winds a road, on the inner edge of which grow a few plane trees and willows. The water gushes out of apertures in the rock between the roots of these trees into a pool some 20 feet in diameter, and flows away in a stream about 15 feet broad and 3 deep, for a distance of about 100 feet, where it joins the turbid stream aforementioned at a right angle. The volume of water from this fountain is sufficient to clarify the turbid water from the upper stream, and all flow together a mile or more past the convent of Mar Mârûn, a limpid river, which, however, soon gathers turbidity from the clayey soil, and pours a whitish stream down to the sea at Seleucia, a few miles below Antioch. The temperature of the water at this fountain is $57\frac{1}{2}^{\circ}$ F.

The Qamu'-el-Hurmul, which looms up opposite el-Hurmul, in the middle of the plain, now lay far to the north, and we decided not to go back to visit it. The site is well chosen on the highest ground in the plain, and the monument can be seen in all directions. It has been so often described and figured that it need not detain us any longer.

Crossing the plain without reference to roads, which are always very sinuous in the East, we arrived at Râs-Ba'albek at noon. The rough work of the past week made necessary the services of the good farrier whom we found there. The half day also gave time to write up our journals, work up our calculations, and give attention to the preparations for our journey into the heart of Anti-Lebanon.

Sunday, July 26.—In the morning the Rev. J. Stewart Crawford, of Damascus, preached in Arabic to an audience which comfortably filled

he schoolroom. He took for his theme the story of Naaman the Syrian. The rest of the day was passed in quiet rest.

Monday, July 27.—Our way lay through Wadi Tanīyyat-er-Râs, by a road with a grade easy enough for a carriage. The word Tanīyyat is a corruption of Thenīyyat [تَنْيَّة], which means a fold. It is an appellation of a number of wadies in this part of Anti-Lebanon. In this wadi, a few hundred yards above the village, is the convent of es-Sayyidat-el-Ĥalabīyyah, one of three convents of this order in Syria. The other two are in Lebanon. It is in a ruinous condition, and maintained by only three monks, whose principal business is to look after the property of the Order, which is considerable in these parts. Some hundreds of yards further up the wadi makes a sharp turn to the left, and at this point a cliff, perhaps 400 feet high, frowns over the valley. Just below its summit is a cave called Magharat-Mar-Niqūla. Our guide told us that there is a spring of sweet cold water in this elevated cave.

In the fields above the convent we found *Cleome ornithopodoides*, L., not before noted south of 'Aintâb. We rode for an hour up this valley. Clumps of *Atraphaxis Billardieri*, *Jaub. et Sp.*, at this season covered with its beautiful pink and white scarious fruits, brightened the roadside. Above the head of the valley is a broad plain. Here I found *Johrenia Westii*, *Post*, a new species, *J. fungosa*, *Boiss.*, *Cephalaria stellipilis*, *Boiss.*, and *Hippomarathrum*, *Boissieri*, *Reut. et Havssk.* Ĥalimat-Qobu thrusts up its grand head above the farther end of this plain. Here our party divided, a portion taking the direct road to the peak, while I followed the Qâra road through the Wadi Sureijat-ed-Dib, to a point two hours short of Qâra. In this way I rounded the northern outlier of the Ĥalimat-Qobu, which is a truncated cone, 7,000 feet high, called Ĥalimat-Qobr-Isma'în. I ascended this peak by a stiff climb, and obtained a fine view of the southern Ĥalaim, as well as of Ĥalimat-Qobu, just opposite. The word Ĥalimat is a corruption of Huleimat [حَلِيمَة], the diminutive of Ĥalāmât, which signifies a nipple. It corresponds to *mamillary peak*. It is only used in the neighbourhood of northern Anti-Lebanon, where indeed are almost the only peaks to which, by their conical form, it would be applicable. All the peaks north of Wadi Khashshâbeli are more or less conical, and so in marked contrast with the gigantic whalebacks of the rest of the Anti-Lebanon chain, and of most of Lebanon.

Descending from this peak by a steep decline of six or seven hundred feet, to the divide between Wadi Za'rûr and Wadi el-Mîreh, I found a solitary tree of *Amygdalus communis*, L., loaded with ripe almonds, of the usual shape, but no larger than cherries. The taste of the kernel resembled that of a peach-stone. Some 200 yards beyond is the 'Ain-el-Qobu, all the surroundings of which have been fairly described by Burton. Under a lizzâb tree above the fountain I found my associates. After lunching we ascended to the summit by a comparatively easy path. The characteristic vegetation of the cone consists of *Cousinia Dagi*, *Post* (a

plant which abounds on all the Halaïm, and in all the intervening valleys, and on the 'Asal-el-Ward plateau), *Ballota Antilibanotica*, Post (a plant peculiar to the northern Anti-Lebanon, growing quite to the summit of the Halaïm), *Acantholimon Libanoticum*, Boiss., *A. Armenum*, Boiss. et Huot, *Pyrethrum densum*, Lab., *Euphorbia tinctoria*, L., *Onobrychis cornuta*, Boiss., *Stipa* sp., *Scabiosa Ukranica*, L. Scattered lizzâb trees grow nearly to the summit, which is 8,090 feet above the sea. The view from Halimat-Qobu is very extensive. It includes all the mountain systems of the Syrian Desert, the Nebk plateau, with its green oases in the midst of a parched brown desert. Far to the north-east Qaryetein can be seen, nestled in its green gardens. The range of Lebanon, from the northernmost spur of el-Jebel-el-abiad to Jebel Kenîseh, is in full view. The angles taken by Professor West from this point will go far toward settling the topography of the map of the two ranges. After an hour spent in taking observation, photographs, and enjoying the superb view, we came down to our camp near 'Ain-el-Qobu.

Tuesday, July 28.—Leaving our equipage to go by the road to Jurcîjir, Professor West and I wound around the northern and eastern face of Halimat-Qobu, crossed Wadi Mar-Tubîyah, and climbed Sudr-esh-Sheikh-'Ali, which is 7,000 feet above the sea. On its bleak summit I found *Alyssum alpestre*, L., var. *minutiflorum*, Boiss., *Papaver Libanoticum*, Boiss., *Pyrethrum densum*, Lab., *Jerinea Stahlina*, D.C., *Teucrium Polium*, L., *Astragalus exiguus*, Post (a new species).

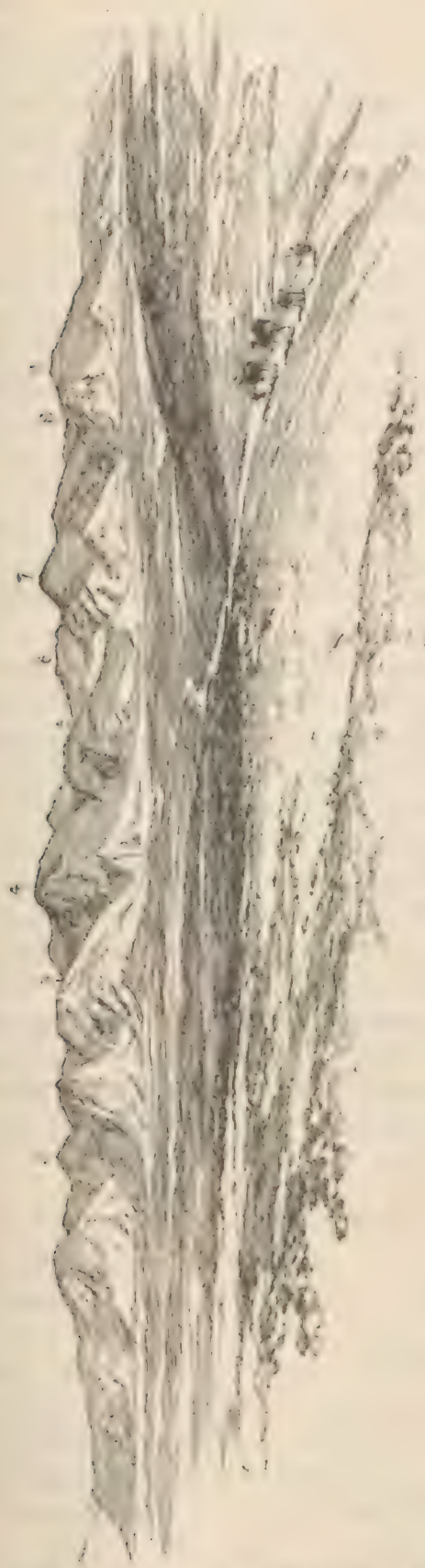
Opposite to Sudr-esh-Sheikh-'Ali, separated from it by Wadi el-Mâl, is the twin peak of Sudr-Wadi el-Mal, or Halimat-Qureis. We climbed it also, and found the height 7,800 feet. On the rocks near its southern end I found *Dianthus Haussknechtii*, Boiss., which I had found last year on the top of Jebel Barûk. It had not been previously noted south of the mountains of Asia Minor. These twin peaks, with Halimat-Qobu, form a mass also known as Halimat-Qâra.

Descending from this peak by its western flank to Weshel-el-Qureis (the trickling fountain of the nettle), we lunched under a lizzâb tree just above this cool fountain, 7,000 feet above the sea. It is one of the most elevated springs in the mountains of Syria. 'Ain-el-beida, above Buṣwayeh, is about the same height.

We tried almost in vain to obtain information from the goatherds in regard to the peaks, valleys and springs of the mountains. It is a belief firmly fastened in their minds that foreigners visit these mountains to search for hidden treasure, the clue to which is recorded in their books. They believe that we know the names of the natural features of the country from our books and maps, and that all we need is to have the places pointed out to us to enable us to dig successfully for the coveted treasure. Accordingly they refuse to impart information, lest we should find wealth which they hope to unearth for themselves. Often they dig in places which they have seen us visit and search in vain for the much-desired gold.

Above and around the fountain is a large number of boulders which

have rolled down from the mountain. On the opposite sunny slope, two



PROFILE OF THE HALAIM.

1. Wâdi Khurbet.
2. Sudr Wairiq.
3. Wâdi Zamarâni.
4. Halimat Zamarâni.
5. Wâdi Barad.

6. Halimat Qurrais.
7. Halimat Qarah or Sudr Sheikh 'Ali.
8. Wâdi Sheikh 'Ali.
9. Halimat Qabu.
10. Road to Buqâ' from Jureijir.

flocks of goats were awaiting their turn to be watered. They lay patiently

in the blazing mid-day sun, until their respective herdsmen gave them their signal, and then came in quite an orderly way to the drinking troughs. The care and accuracy with which the herdsmen see that every goat drinks as much as it needs is admirable. One kid did not seem thirsty. The herdsman held it between his legs, opened its mouth and thrust a tarred stick down its throat to excite thirst, and then put its nose into the trough and held it there until the animal began to drink. The herdsmen say that the goats will not drink oftener than once in a day, even if water be offered to them.

After leaving 'Ain-Weshel-el-Qureis we rounded the southern shoulder of Sudr-Wadi-el-Mal, and descended into the Nebk plateau by the Wadi el-Barad, reaching our camp at Jureijir at about 5 p.m. Wadi Barad changes its name after the watershed, and then becomes Wadi Farah.

Jureijir is a forlorn village in a dusty plain without a single tree to relieve the surrounding barrenness. It has been in ruins for 150 years, and only reoccupied for about 10 years.

Wednesday, July 29.—After taking the accompanying profile of the Halaïm we rode on to Yebrûd, two hours away, and encamped in the meadow by the great fountain. On the way I had collected *Carthamus flavesens*, W., and *Ankyropetalum Cœlesyriacum*, Boiss.

At Yebrûd we met Dr. Adams and Messrs. Bucher and Walker, of the Syrian Protestant College, who were spending the summer there. The gardens of Yebrûd are quite charming, and the surrounding hills very picturesque in outline. On our camping ground I found *Centaurea Pastii*, Boiss. (not heretofore found east of Anti-Lebanon, except by myself last year at Qaryetein), and in the clefts of the rocks above the meadow I found *Truerium Sacinianum*, Boiss., *Reutera tenuis* Boiss. et Haussk. (not heretofore found south of eastern Asia Minor), *Galium canum*, Req., *Dianthus Libanotis*, Labill., and in the shade of the rocks and in the tombs *Scolopendrium officinale*, L., and *Adiantum Capillus-Veneris*, L.

Mr. Ibrahim Katibi, the accomplished teacher and preacher of the Irish mission in this town, gave me many valuable points in regard to the Arabic names of places on the map. The following list gives the present readings in Johnston's map of Palestine and the corrections in English transliteration and in Arabic letters:—

PRESENT READING.	CORRECTION.	ARABIC.
Hasyah	Hasyâ	حَسْيَا
Hawarîn	Hawwârîn	حَوَارِينَ
Karyetein	El-Qaryetein	الْقَرِيَتَيْنِ
Kustul	Qastal	قَسْطَل
Karnat-el-Wayrik	Qarnat-el-Wâriq	قَرْنَةُ الْوَارِقِ

PRESENT READING.	CORRECTION.	ARABIC.
Kara	Qârah	قَارَة
Falitah	Falîṭah	فَلِيطَة
Sahil	Es-Sihl	السَّحْل
Ma'arrat-el-Bash-Kurdi	Ma'arrat-el-Bash-Quryeh	مَعَرَّةُ الْبَاشِ قَرْيَة
Jebel-Nebi-Baruh	Jebel-Nebi-Barûḥ	جَبَلُ نَبِيِّ بَارُوح
Jebel-el-Baradah	Jebel-el-Bâridah	جَبَلُ الْبَارِدَة
Kaldun	Qaldûn	قَلْدُون
Kuteifah	Qūṭeifa	قُطَيْفَا
Akauber	'Akaubir	عَكُوبِر
Rankush	Rankûs	رَنْكُوس
Ain Tiniah	'Ain-et-Tineh	عَيْنُ التَّيْنَةِ
Telfita	Telfîṭah	تَلْفَيْتَة
Ma'amurah	El-Ma'mûrah	الْمَعْمُورَة
Wahabiyeh	Khirbet-el-Mûhibîyeh	خَيْرْبَتُة الْمَوْحِبِيَّة
Jebel Abu Ata	Jebel-Abu.l-'Atâ	جَبَلُ أَبُو الْعَتَا
Jebel'azra	Jebel-'Adhra	جَبَلُ عَذْرَا
Duma	Dumah	دُومَة
'Azra	'Adhra	عَذْرَا
Helbon	Halbûn	حَلْبُون
Jayrud	Jarûd	جَرُود

In due time we hope to be able to give similar corrections for all the region covered by Johnston's map.

Thursday, July 30.—We rode in company with Mr. Katibi to Ma'arrat-el-Bash-Quryeh (usually written Bash-Kurdi), an hour and a half away. In the face of a cliff, some 60 feet high overlooking this village, is a large cave and numerous rock-hewn chambers similar to those in Ma'lulah, but

not inhabited. They are now used for the storage of goats' dung, which constitutes one of the sources of wealth in Ma'arrah.

From Ma'arrah we ascended by an easy valley to the base of Tafat-Musa, an hour and a half from the village. In this valley I met with *Phacopappus longispinus*, Post (common in the northern Anti-Lebanon valleys and the 'Asal-el-Ward plateau), *Scrophularia xanthoglossa*, Boiss., var. *decipiens*, Boiss., *Plantago Europea*, L. (Arabice Khamisheh), *Euphorbia tinctoria*, L. (Arabice La'iyah), *Cousinia Daghi*, Post, *C. Pestalozzei*, Boiss. (Arabice Shih-es-Sirr), *Jurinea Stachelina*, D.C. ? ? (Arabice Shih-el-Birkân).

Tafat-Mûsa consists of an amphitheatre of mountains opening out to the north-east. The eastern shoulder of this amphitheatre is formed by Jebel-er-Râs-er-Rafi'. We ascended this bold peak, from which, as it juts out beyond the general line of the chain, the view is especially comprehensive and useful for cartographic purposes. Professor West obtained many angles from this point. The height is 8,000 feet.

Descending a few hundred feet, and riding along a shoulder, we came to the base of the principal cone, up which we rode by a series of zigzags to the summit, 8,300 feet above the sea. The view is less impressive than that from er-Râs-er-Rafi', although the elevation is the greatest in the Anti-Lebanon, except Hermon. The most striking feature of the view from this peak is el-Khushsha'ah, a wilderness composed of a series of precipitous terraces rising one above another, and clothed with straggling lizzâb trees.

We measured by aneroid the central cone of the amphitheatre, and found it nearly the same as Jebel-Musa. The others are evidently lower. On this cone I again found *Dianthus Haussknechtii*, Boiss., also *Micromeria Libanotica*, Boiss., var. *major*, Post. As I returned I alarmed a bear which had been hiding under one of the lizzâb trees. It disappeared behind the rocks, and Mr. Crawford searched for it a quarter of an hour in vain. After enjoying for three hours the views from the summit we descended to Wadi-el-'Ayûn, and watered our parched horses by the fountain, 7,300 feet above the sea. We then returned by the way of Ma'arrah to our camp at Yebrûd.

Friday, July 31.—We left our turfy camp at 8 a.m., and rode along the dry plateau for three hours to Jubbeh, a little village near the divide between the plain of Yebrûd and that of 'Asal-el-Ward. The flora of the plateau over which we passed consists, at this season, almost wholly of clumps of *Artemisia Herba-alba*, L., *Jurinea Stachelina*, D.C., and *Acantholimon Armenum*, Boiss. et Hart. In the table land of Jubbeh, I found *Dianthus Libanotis*, Labill., *Daucus pulcherrimus*, *Onosma sericeum*, Willd.

After lunching under a butm tree, near el-Jubbeh, we rode in an hour to 'Asâl-el-Ward, then in one and a half to Ras-el-'Ain, and in an hour more to Rankûs, just over the crest of the upper Qalamûn range. At the top of the pass between Râs-el-'Ain and Rankûs I found *Thymus Afrada*, Post, a pretty moss-like species, growing appressed to the rocks by the roadside. Rankûs is a dirty village, which does not even possess a

fountain. The water is supplied by cisterns, and we found it undrinkable. Fortunately we had brought a supply for the table from the cool fountain of Râs-el-'Ain. We pitched our camp on a breezy shoulder above the town at a convenient distance from its noise and filth.

Saturday, August 1.—I left at 6½ a.m. for Seidenayah. The road lay down the valley, then along the lower flank of the upper Qalamûr range



CONVENT AT SEIDENAYAH.

I took a view of the picturesque convent from the rocks opposite its north-west corner.

I then visited the convent. At the top of the isolated rock on which it is built are several hewn tombs. That at the northern end is quite large, and the receptacles for the bodies hewn into the floor of the cave. The present church and a large part of the walls are of recent construction (1870). The village is as dirty and uncivilized as most of those in these parts. The height of the village fountain is 4,400 feet.

From Seidenayah we crossed the plain to the opposite ridge, descended into a broad valley with numerous fig orchards, ascended a steep slope, and crossed the lower ridge of Jebel Qalamûn. As we emerged from the gap at the crest, the wonderful view of the Damascus plain, backed by the distant hills of Bashan, burst upon our sight. After seeing the plain from all other points of approach I must pronounce this view the most impressive of the panoramas of Damascus and its environs. We reached the city at 4 p.m., in time to post letters by the evening coach to Beirut.

Having in this journey, and that of the previous summer, completed the study of almost the whole length of the chains of Lebanon and Anti-Lebanon, it may be well to compare the two.

They are alike in the fact that they are both limestone chains, with the exception of the south-eastern flanks of Hermon, which are volcanic. Lebanon, receiving, as it does, a far heavier rainfall than Anti-Lebanon, exhibits, especially on its western slopes, the phenomena of erosion by water on a far grander scale than Anti-Lebanon. There is a great contrast between the sublime gorges of the Nahr-el-Barid, in the Dumîyeh, the Qadîsha, the Nahr Ibrahim, Nahr el-Kelb, Nahr Beirût, the Awwali, and the Zaharâni, on the one hand, and the tame wadies of Tamniyat-er-Râs, Wadi-el-Mâl, Wadi-el-Barad, Wadi-el-Ilwâr, Wadi-el-Qarn, and the Hâsbâni valley on the other. Lebanon consists of one ridge, with the commanding peaks of Jebel 'Akkâr, Makmel, Sunnîn, Kenîseh, and the long nave of Jebel Barûk, ending in the twin peaks of Tomat-Nîha. Anti-Lebanon consists of the giant ridge of Hermon at the south, from which no less than five ridges spread out in a fan shape. The interspaces of these ridges constitute a plateau 4,000 to 5,500 feet above the sea, from which the mountain ranges rise to a height of 7,000 to 8,400 feet. The northern end of the second series, commencing from the west, is composed of the more or less conical Halaïm.

The flora of the two ranges differs considerably. That of Lebanon is more varied and numerous than that of the sister range. From the greater elevation of the peaks the alpine and arctic species are more numerous in Lebanon. A few highly characteristic species, however, are found among the Halaïm, and on the elevated plateaus of Anti-Lebanon.

A day or two after our arrival in Damascus, Mr. Crawford and myself took a ride into the Ghautah, with the pleasing result of finding a new species, *Asperula Ghautensis*, Post. We also found fine specimens of *Senecio erraticus*, Bertol.

LIST OF PLANTS COLLECTED IN NORTHERN LEBANON,
ANTI-LEBANON AND DAMASCUS.

I.—PAPAVERACEÆ.

Papaver Libanoticum, Boiss. Sudr-esh-Sheikh-'Ali (Anti-Lebanon).

II.—BERBERIDACEÆ.

Berberis Cretica, L. Buṣwayeh (Lebanon).

III.—CRUCIFERÆ.

Mathiola Damascena, Boiss. Wadi Barada (Damascus).

Alyssum alpestre, L., var. *minutiflorum*, Boiss. Sudr-esh-Sheikh-'Ali (Anti-Lebanon).

Arabis albida, Stev. Rijâl-el-'asherah (Lebanon).

Ethionema oppositifolium, Labill. Rijâl-el-'asherah (Lebanon).

ERYSIMUM LIBANOTICUM, Post., sp. nov. Between Rijâl-el-'asherah and el-Qal'ah (Lebanon).

IV.—CAPPARIDACEÆ.

Glome ornithopodoides, L. Wadi Taniyyat-er-Râs (Anti-Lebanon).

V.—SILENEÆ.

Dianthus Haussknechtii, Boiss. Sudr Wadi-el-Mâl and Ṭal'at-Mûsa (Anti-Lebanon).

Dianthus Libanotis, Labill. Yebrûd.

Gypsophila hirsuta, Boiss. var. *alpina*, Boiss. Ascent to Rijâl-el-'asherah (Lebanon); var. *filicaulis*, Boiss. Wadi Ibrisah (Lebanon).

Ankyropetalum Coelesyriacum, Boiss. Yebrûd Plateau.

Silene swertiaefolia, Boiss. var. *BREVIPES*, Post. Wadi el-Qarn (Anti-Lebanon).

Alsine rupestris, Labill. Ascent to Rijâl-el-'asherah (Lebanon).

,, *Libanotica*, Boiss. var. *papillosa*, Post, Rijâl-el-'asherah.

VI.—ZYGOPHYLLACEÆ.

Fagonia Olivieri, D.C. Ma'arrat-el-Bash-Quryeh (Anti-Lebanon).

VII.—RHAMNACEÆ.

Rhamnus punctata, Boiss. Wadi-el-Qarn (Anti-Lebanon).

VIII.—LEGUMINOSÆ.

- Ononis vaginalis*, Vahl. Seidanayeh (Anti-Lebanon).
Colutea arborescens, L. Wadi Ibrîsah (Lebanon).
Astragalus hirsutissimus, D.C. Wadi Ibrîsah (Lebanon).
 „ *cruentiflorus*, Boiss. Ma'arrat-el-Bash-Quryah (Anti-Lebanon).
 „ *EXIGUUS*, Post. Top of Sudr-esh-Sheikh-'Ali (Anti-Lebanon).
Alhagi Camelorum, Fisch. El-Ghautah (Damascus).

IX.—ROSACEÆ.

- Amygdalus communis*, L. 'Ain-el-Qobu (Anti-Lebanon).
Cerasus Antilibanotica, Post. Wadi-el-Qarn (Anti-Lebanon).
Prunus ursina, L. Dunnîyeh (Lebanon).
Potentilla Libanotica, Boiss. Sir (Lebanon).
Rosa canina, L. Wadi-el-Qarn (Anti-Lebanon).
Cotoneaster nummularia, F. et M. Mishmish (Lebanon). 'Ain-el-Qobu (Anti-Lebanon).

X.—SAXIFRAGACEÆ.

- Ribes Orientale*, Poir. Dunnîyeh (Lebanon).

XI.—UMBELLIFERÆ.

- Buplevrum Libanoticum*, Boiss. et Bl. Wadi Tanîyyat-er-Râs (Anti-Lebanon).
Hippomarathrum Boissieri, Reut. et Haussk. Wadi Tanîyyat-er-Râs (Anti-Lebanon).
Pimpinella corymbosa, Boiss. Wadi Ibrîsah (Lebanon).
 „ *Tragium*, L. var. *depauperatum*, Boiss. Ma'arrat-el-Bash-Quryeh (Anti-Lebanon).
Reutera tenuis, Boiss. et Haussk. Yebrûd.
CHLEROPHYLLUM AFRANTIACUM, Post., sp. nov. Subalpine wheat fields on right of road between Sir and el-Merj-et-Tawîl (Lebanon).
Jahrenia fungosa, Boiss. Wadi Tanîyyat-er-Râs (Anti-Lebanon).
 „ *WESTII*, Post. Plain at head of Wadi Tanîyyat-er-Râs (Anti-Lebanon).
Turgeniopsis foeniculacea, Fenzl. Merj-Ilîn (Lebanon).

XII.—CAPRIFOLIACEÆ.

- Lonicera nummularifolia*, J. et Sp. Halimât-Qobu. Wadi-el-Mâl (Anti-Lebanon).

XIII.—RUBIACEÆ.

- ASPERULA GHAUTENSIS*, Post. El-Ghautah (Damascus).
Galium canum, Req. Yebrûd.

XIV.—DIPSACEÆ.

- Cephalaria stellipilis*, Boiss. Wadi Tantiyyat-er-Râs (Anti-Lebanon).
 „ *dipsacoides*, Boiss. var. *Libanotica*, Boiss. 'Ain-Sofar (Lebanon).

XV.—COMPOSITÆ.

- Postia lanuginosa*, D.C. Wadi Ibrîsah (Lebanon).
Achillæa Santolina, L. Ta'at-Mûsa (Anti-Lebanon).
Anthemis Cotula, L. El-Ghautah (Damascus).
Pyrethrum densum, Labill. Halimat-Qobu. Sudr-esh-Sheikh-'Ali (Anti-Lebanon).
Senecio erraticus, Bertol. El-Ghautah (Damascus).
Cousinia foliosa, Boiss. et Bal. Wadi-el-Mâl (Anti-Lebanon).
 „ *Dayi*, Post. Halimat-Qobu (Anti-Lebanon).
Centaurea Postii, Boiss. Yebrûd.
Jurinea Stæhelinæ, D.C. (?) Wadi Ibrîsah (Lebanon).
Phacopappus longispinus, Post. Ma'arrat-el-Bash-Quryeh (Anti-Lebanon).
AUTRANIA PULCHELLA, Winkler et Barbey. Rijâl-el-'asherah (Lebanon).
 A new genus and also a new species.
Carthamus flavescens, W. Yebrûd.
Sonchus asper, Vill. El-Ghautah (Damascus).
Scorzonera Makmeliana, Boiss. Rijâl-el-'asherah (Lebanon).
 „ *rigida*, Auch. Rijâl-el-'asherah (Lebanon).
Tragopogon bupthalmoides, Boiss. var. *humile*, Boiss. Wadi-es-Sifsâf (above Merj-Ilîn).

XVI.—CAMPANULACEÆ.

- Campanula stricta*, Labill. Ascent to Rijâl-el-'asherah (Lebanon).
Podanthum virgatum, Labill. Rijâl-el-'asherah (Lebanon).

XVII.—PLUMBAGINACEÆ.

- Acantholinon acerosum*, Willd. Wadi-Tantiyyat-er-Râs (Anti-Lebanon).
 „ *Armenum*, Boiss et Huet. Halimat-Qobu (Anti-Lebanon).

XVIII.—PRIMULACEÆ.

- Androsace villosa*, L. Rijâl-el-'asherah (Lebanon).

XIX.—OLEACEÆ.

- Phillyrea media*, L. Wadi-Ibrîsah (Lebanon).

XX.—BORRAGINEÆ.

- Oocoma sericeum*, Willd. Jubbeh (Anti-Lebanon).

XXI.—SCROPHULARIACEÆ.

- Verbascum simplex*, Labill. Yebrûd.
 „ *ptychophyllum*, Boiss. Yebrûd.
 „ *Cæsareum*, Boiss. Sir to Neba'-es-Sikkar (Lebanon).
 „ *Damascenum*, Boiss. Yebrûd. Sudr-Wadi-el-Mal (Anti-Lebanon).
 „ *ALICIÆ*, Post. Wadi-Ibrîsah, near el-Hürmûl (Lebanon).
Scrophularia xanthoglossa, Boiss. Jebel-Keniseh; var. *decipiens*, Boiss.
 Mu'arrat-el-Bâsh-Quryah (Anti-Lebanon).

XXII.—LABIATÆ.

- Micromeria Libanotica*, Boiss. var. *major*, Post. Tal'at-Mûsa (Anti-Lebanon).
Thymus hirsutus, M.B. Ascent to Rijâl-el-'asherah (Lebanon).
 „ *ALFREDÆ*, Post. Top of pass above Rankûs (Anti-Lebanon).
Salvia grandiflora, Ettl. Sir to Neba'-es-Sikkar (Lebanon).
Ballota saxatilis, Sieb. Wadi-el-Qarn (Anti-Lebanon).
 „ *Antilibanotica*, Post. Throughout northern Anti-Lebanon.
Teucrium Socinianum, Boiss. Yebrûd.
Stachys nivea, Lab. Tal 'at-Mûsa (Anti-Lebanon).

XXIII.—SALSOLACEÆ.

- Nœa spinosissima*, Moq. Base of Tal 'at-Mûsa (Anti-Lebanon).
Atriplex Tataricum, L. Jubbeh (Anti-Lebanon).

XXIV.—POLYGONACEÆ.

- Polygonum polyanthemoides*, Jaub. et Sp. Wadi-es-Sîfşâf (Lebanon).
Rumex Orientalis, Bernh. Sir to Neba'-es-Sikkar (Lebanon).
Atraphaxis Billardieri, Jaub. et Sp. Wadi-Tantiyyat-er-Râs (Anti-Lebanon).

XXV.—BALANOPHORACEÆ.

- Cynomorium coccineum*, L. Yebrûd Plateau.

XXVI.—EUPHORBIACEÆ.

- Euphorbia pubescens*, Vahl. Shetûrah (Coelesyria).
 „ *caudiculosa*, Boiss. Rijâl-el-'asherah (Lebanon).

XXVII.—URTICACEÆ.

- Parietaria Judaica*, var. *brevipetiolata*, Boiss. Yebrûd (Anti-Lebanon).
Urtica dioica, L. Wadi-es-Sîfşâf, near Merj-Ilîn (Lebanon).

XXVIII.—CONIFERÆ.

- Abies Cilicica*, Ant. et Ky. Dūnnîyeh (Lebanon).
Juniperus excelsa, M.B. Universal in Upper Lebanon and Anti-Lebanon. (Arabice, *Lizzâb*.)

XXIX.—SALICACEÆ.

- Salix* sp. Wadi-es-Sifşâf near Merj-İîin (Lebanon).

XXX.—CUPULIFERÆ.

- Quercus coccifera*, L. Wadi-Ibrîsah (Lebanon).

XXXI.—LILIACEÆ.

- Scilla Hanburyi*, Baker. Yebrûd Plateau.
Allium sphaerocephalum, L. (?) Merj-İîin (Lebanon).
 " *MAKMELIANUM*, Post. Rijâl-el-'asherah (Lebanon).
 " sp. Wadi-es-Sifşâf, near Merj-İîin (Lebanon).

XXXII.—NALADACEÆ.

- Potamogeton pectinatus*, L. Birket-Buşwâye (Lebanon).

XXXIII.—CYPERACEÆ.

- Carex divisa*, Huds. Wadi-es-Sifşâf, near Merj-İîin (Lebanon).
Cyperus longus, L. El-Ghautah (Damascus).

XXXIV.—GRAMINEÆ.

- Alopecurus involucratus*, Post. Judeideh (Anti-Lebanon).
Stipa sp. Halîmat-Qobu (Anti-Lebanon).
Festuca ovina, L., var. *pinifolia*, Hackel. Rijâl-el-'asherah (Lebanon).
 " sp. Rijâl-el-'asherah (Lebanon).

Besides the comparatively small number of plants collected, and named above, many more were observed, which have been noted in the lists previously published. The names in *italics* are those of plants not heretofore observed in the locality mentioned. Those in SMALL CAPITALS are new species. The comparatively large number of these, 8 out of 106, illustrates the unexplored character of the region visited.

THE PHENICIAN INSCRIPTIONS ON THE VASE HANDLES FOUND AT JERUSALEM.

By Rev. Professor SAYCE, LL.D.

IN my article in the *Quarterly Statement* on "The Cuneiform and other Inscriptions found at Lachish and elsewhere in the South of Palestine," I promised to return to the inscriptions on the clay vase-handles discovered at the foot of the Harâm wall at Jerusalem. These inscriptions, it will be remembered, are—(1), [L-M-L-K] SH-T; (2), [L]-M-[L]-K SH K-H, and (3), L-M-L-K Z-PH. They are inscribed above and below the figure of the winged solar disk.

The meaning of the first word is clear. It signifies "belonging to Melech," or the "King." The use of the preposition 𐤋 in this sense is common on seals and similar objects, and ought to be followed by the name of the owner. But it is impossible in the case of the handles to believe that each of them belonged to a different individual, and yet that each of the names of the individuals began with the same element—*melech*.

Now Z-PH and SH K-H represent the names of two localities in Judah, Ziph (2 Chron. xi, 8) and Socho (Josh. xv, 35), neither of which was very far distant from Jerusalem. Melech (or Moloch, as it was punctuated by the Masoretes) is the well-known title of a deity who was worshipped in Canaan as well as beyond the Jordan, and accordingly, in Melech-Ziph and Melech-Shochoh, I propose to see the local names of a god. They would be analogous in formation to the name of the chief god of Tyre, Melech-Qiryath—"Melech of the City"—which was subsequently contracted into Melkarth. Such combinations of a local name with the divine titles Melech and Baal were not uncommon in Palestine.

In Melech-Sheth we shall have to look for a compound similar to Melech-Ziph and Melech-Shochoh, "the Moloch of Ziph" and "the Moloch of Socho." We are at once reminded of the fact that in the prophecy of Balaam (Numb. xxiv, 17) the Moabites are called "the children of Sheth." Some years ago I endeavoured to show in the pages of *Hebraica* that in Gen. iv, 7, there is perhaps a reference to an old proverb in which the name of a god, Seth, was mentioned—"If thou doest well, it is Seth, and if thou doest not well Khattâth (Nergal in Babylonian) crouches at the door." However this may be, the Egyptian god Set came to be regarded as specially the god of the numerous Semites, who were settled in the Delta where he was worshipped, and the Egyptians identified him accordingly with the Semitic Baal. We now have evidence that he was actually adopted as a deity by the Canaanites. In M. de Clercq's collection of seal-cylinders there are two of peculiar interest.¹ On each of them is a cuneiform inscription,

¹ "Collection De Clercq, Catalogue méthodique et raisonné," I, p. 217 (1888).

one reading: "Addumu, the citizen of Sidon, the crown of the gods," and the other: "Anniy, the son of Addumu, the citizen of Sidon." The forms of the characters, as well as the use of the determinatives and the way in which the name of Anniy is written, show that the cylinders belong to the age of the Tell el Amarna tablets, when the cuneiform syllabary was employed in Palestine for writing purposes. On the cylinder of Addumu—whose name, like those of so many Canaanites in the Tell el Amarna tablets, is compounded with the name of the god Hadad—the owner of the seal is represented as standing in an attitude of adoration before the god Set, while behind him is the lightning-god Resheph. Set has the long ass's ears with which Egyptian art provided him, and holds in his hand the "uas" sceptre. On the cylinder of Anniy there is a procession of three deities, Resheph, with his battle-axe held aloft; the Sun-god, with the solar disk above the hawk's head of Horus; and Set. Set is depicted as on the cylinder of Addumu.

The Canaanite worship of Set with the ass's head is doubtless the origin of the stories which declared that the people of Palestine, and more especially the Jews, adored the head of that animal (see Tacitus *Hist.* v, 4; Diodorus Sic. xiv, 1; Josephus, *Cont. Ap.* ii, 7; Plutarch, *Symp.* iv, 5). The belief lingered on to a late date, as in the great French *Description de l'Égypte* (iii. pl., 64 *Ant.*) there is reproduced the figure of a man with the head of an ass, and on his breast the word *Séth* in Coptic letters.

It would seem, therefore, that the second element in the compound Melech-Sheth is not the name of a locality, of which there is otherwise no record, but of a divinity who was borrowed by the people of Canaan from Egypt. The compound accordingly will be similar to the compound Hadad-Rimmon, where the names of two deities are combined together. We may also compare names like Malchiel and Malchijah.¹

The vases to which the handles belonged must have been dedicated to the service of Melech, or Moloch, in his various local forms, and it is possible that the winged solar disk may have been regarded as his symbol. It is worthy of notice that the pottery was found in what, as will be seen from former papers of mine in the *Quarterly Statement*, I believe to have been the Valley of the Sons of Hinnom, where in later days children were burnt in honour of Moloch (2 Kings xxiii, 10).

In the article in which I refer to the inscriptions on the vase-handles I have stupidly failed to decipher the inscription on the flat dish discovered at Lachish. It is of course the Hebrew בלע, "Swallow!"—an appropriate inscription for a dish. The form of the *bêth* is particularly interesting, as it supports the theory which would derive the so-called Phœnician alphabet from the Proto-arabic alphabet, which has been

¹ On the other hand we must not forget that the Hebrew Sheth would correspond to the cuneiform 'Sute, or Bedouin nomads. In the Tell el Amarna tablets the 'Sute are identical with the Sati of the Egyptian texts, who specially haunted the deserts and mountains east of the Jordan. Just as Ammi was the god of the Beni-Ammon, so Set may have been the god of the Beni-Sheth or Bedouin.

preserved in the alphabets of Southern Arabia. The forms of the Phœnician *beth* hitherto known do not bear a very close resemblance to the South Arabian *b*; on the other hand, the new form which has been disinterred at Lachish is identical with it, if turned on its side, as is necessary when we compare the Phœnician and the South Arabian forms of the letters. Like the South Arabian *b*, it then is also identical with the old hieratic form of the Egyptian hieroglyphic for "house." And *beth*, as everyone knows, signifies "a house."

METEOROLOGICAL REPORT FROM JERUSALEM FOR YEAR 1882.

By JAMES GLAISHER, F.R.S.

THE numbers in column 1 of this table show the highest reading of the barometer in each month; of these the highest appear in the winter, and the lowest in the summer months; the maximum for the year is 27·721 inches, in January. In column 2 the lowest in each month are shown: the minimum is 27·108 inches in April; the range of readings in the year was 0·613 inch. The numbers in the 3rd column show the extreme range of readings in each month; the smallest, 0·197 inch, is in July, and the largest, 0·517 inch, is in April. The numbers in the 4th column show the mean monthly pressure of the atmosphere; the highest, 27·516 inches, is in January, and the lowest, 27·272 inches, is in July. The mean pressure for the year is 27·398 inches; at Sarona the mean pressure for the year was 29·856 inches.

The highest temperature of the air in each month is shown in column 5. The highest in the year was 99°·5, on August 28th, on which day the maximum temperature at Sarona was 89°; the temperature reached or exceeded 90° in every month from May to October, with the exception of July; the first day in the year the temperature reached 90° was on May 12th. In June there were 7 days when the temperature reached or exceeded 90°; in August, 11 days; in September, 7 days; and in October, 2 days, the 1st and 2nd, these being the last days in the year of such a high temperature as 90°. Therefore the temperature reached or exceeded 90° on 28 days during the year. At Sarona the temperature did not reach 90° till September 24th, and reached or exceeded 90° on only 8 days in the year; the highest in the year at Sarona, viz. 93°, took place on November 1st, on which day the maximum temperature at Jerusalem was 74°.

The lowest temperature of the air in each month is shown in column 6. The lowest in the year was 28°·5, on both the 3rd and 12th of February; the temperature was below 40°, in January, on 18 nights; in February, on 25 nights; in March, on 1 night; and in April, on 2 nights; the last night in the year the temperature was below 40° was April 16th.

Therefore the temperature was below 40° on 46 nights during the year. The yearly range of temperature was 71°. At Sarona the temperature was below 40° on 14 nights in the year; the lowest in the year was 34°, on January 30th. The yearly range at Sarona was 59°.

The range of temperature in each month is shown in column 7, and these numbers vary from 25° in January, to 50° in May. At Sarona the range of temperature in each month varied from 25° in August, to 47° in November.

The mean of all the highest by day, of the lowest by night, and of the average daily ranges of temperature, are shown in columns 8, 9 and 10 respectively. Of the high day temperature, the lowest, 49°, is in February, and the highest, 88°·2, in August. At Sarona, of the high day temperature, the lowest, 55°·7, is in February, and the highest, 87°·2, in September. Of the low night temperature, the coldest, 36°·1, is in February, and the warmest, 65°·3, is in August. At Sarona, of the low night temperature, the coldest, 43°·7, is in January, and the warmest, 68°·7, in August.

The average daily range of temperature, as shown in column 10, the smallest, 11°·4, is in December, and the largest, 22°·9, is in August. At Sarona, of the average daily range, the smallest, 11°·7, was in February, and the largest, 22°·7, in October.

In column 11, the mean temperature of each month, as found from observations of the maximum and minimum thermometers only are shown; the month of the lowest temperature is February, 42°·5, and that of the highest is August, 76°·8. The mean for the year is 62°. At Sarona, of the mean temperature of each month, the lowest is February, 49°·8, and the highest, August, 78°·6. The mean for the year at Sarona is 65°·5.

The numbers in columns 12 and 13 are the monthly means of a dry and wet bulb thermometer, taken daily, at 9 a.m., and in column 14, the monthly temperature of the dew-point, or that of the temperature at which dew would have been deposited. The elastic force of vapour is shown in column 15, and in column 16 the water present in a cubic foot of air, in January, was as small as 2½ grains, and as large as 5 grains, in August. The numbers in column 18 show the degree of humidity, saturation being considered as 100, the smallest number in this column is in June, and the largest number in January. The weight of a cubic foot of air under its pressure, temperature, and humidity, at 9 a.m., is shown in column 19.

The most prevalent winds in January were S.W., W., and E., and the least prevalent wind was N. In February the most prevalent were S.W. and W., and the least prevalent was S.E. In March the most prevalent were W., N.W., and E., and the least were S. and S.W. In April the most prevalent were S.W., S., and S.E., and the least were N. and N.E. In May, June, and July, the most prevalent were N.W. and W., and the least were N.E. and S. In August and September the most prevalent was N.W., and the least were S.E. and S. In

October the most prevalent were N.W. and N., and the least was S.E. In November the most prevalent was N., and the least was S.; and in December the most prevalent winds were W., E., and N., and the least prevalent winds were S.E., S.W., and N.W. The most prevalent wind for the year was N.W., which occurred on 84 times during the year; of which 13 were in both August and September, and 12 in July; and the least prevalent wind for the year was S., which occurred on only 19 times during the year, of which 5 were in April, 4 in December, and 3 in February. At Sarona, the most prevalent wind for the year was S.W., which occurred on 119 times during the year; and the least prevalent was N.E., which occurred on only 12 times during the year.

The numbers in column 28 show the mean amount of cloud in each month; the month with the smallest amount is June, and the largest February. Of the cumulus, or fine weather cloud, there were 49 instances in the year; of these, 9 were in October, 7 in September, and 6 in both May and August, and none in December. Of the nimbus, or rain cloud, there were 32 instances, of which 10 were in February, 8 in April, 5 in both March and December, and only 1 from May to November. Of the cirrus there were 14 instances; of the stratus, 5 instances; of the cumulus stratus, 54 instances, of which 10 were in both January and November, and 9 in December. Of the cirro stratus there were 19 instances; of the cirro cumulus, 24 instances; and 168 instances of cloudless skies, of which 25 were in June, 24 in July, and 22 in September, and only 3 in February. At Sarona there were only 57 instances of cloudless skies, of which 11 were in October, and 8 in both January and June.

The largest fall of rain for the month in the year was in February, 12.59 inches, of which 2.60 inches fell on the 5th, 2.30 inches on the 10th, and 2.13 inches on the 4th. The next largest fall for the month was 4.99 inches, in December, of which 2.69 inches fell on the 27th, and the next in order was 3.65 inches in April, of which 1.18 inch fell on the 15th. No rain fell from the 24th of May till October 23rd, making a period of 151 consecutive days without rain. The total fall of rain for the year was 26.72 inches, which fell on 63 days during the year. At Sarona, the largest fall for the month in the year was 7.22 inches, in February, and the next in order were 4.37 inches, in January, and 4.17 inches, in April. No rain fell at Sarona from May 25th till October 20th, with the exception of one day, viz., August 10th, when 0.35 inch fell, therefore making two periods of 76 and 70 consecutive days without rain. At Sarona, the total fall for the year was 22.09 inches, which fell on 62 days during the year.

(To face p. 244.)

level of the Mediterranean Sea, open on all sides.

Weight of a cubic foot of air.	Direction of wind. Relative proportion of.								Mean amount of cloud.	Rain.	
	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.		Number of days on which it fell.	Amount collected.
grs.											in.
505	1	4	6	2	2	8	6	2	4.3	11	3.08
506	5	3	2	0	3	6	7	2	7.2	16	12.59
493	2	4	6	2	1	1	9	6	3.7	4	0.97
486	1	1	3	5	5	8	4	3	5.8	12	3.65
481	3	1	4	4	1	4	6	8	2.9	4	0.57
473	8	0	2	4	0	1	5	10	0.7	0	0.00
469	3	0	0	1	0	5	10	12	0.9	0	0.00
468	8	3	0	0	0	1	6	13	2.4	0	0.00
470	5	3	3	0	0	0	6	13	0.8	0	0.00
440	7	2	6	0	2	1	5	8	2.5	1	0.07
488	8	4	5	2	1	2	3	5	4.5	4	0.80
495	5	4	6	2	4	2	6	2	6.1	11	4.99
445	sum. 66	sum. 29	sum. 43	sum. 22	sum. 19	sum. 39	sum. 73	sum. 84	3.5	sum. 63	sum. 26.72
19	20	21	22	23	24	25	26	27	28	29	30

MONTHLY METEOROLOGICAL TABLE

Deduced from observations taken at Jerusalem, by JOSEPH GANEL, in a garden within the city, about 2,500 feet above the level of the Mediterranean Sea, open on all sides.
Latitude, $31^{\circ} 46' 40''$ N., Longitude, $35^{\circ} 13' 30''$ E.

Months.	Pressure of atmosphere in month.				Temperature of the air in month, at 9 a.m.							Mean readings.			Vapour.			Degree of humidity.	Weight of a cubic foot of air.	Direction of wind. Relative proportion of.								Mean amount of cloud.	Rain.	
	Highest.	Lowest.	Range.	Mean.	Highest.	Lowest.	Range.	Mean of all highest.	Mean of all lowest.	Mean daily range.	Mean.	Dry bulb.	Wet bulb.	Dew point.	Elastic force of vapour.	Weight of vapour in a cubic foot of air.	Additional weight required for saturation.			N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.		Number of days on which it fell.	Amount collected.
1882.	in.	in.	in.	in.											GRS.	GRS.	GRS.	°	GRS.										in.	
January ...	27.721	27.314	0.407	27.516	56.5	31.0	25.5	49.8	37.4	12.4	43.6	45.3	41.8	37.8	.227	2.6	0.5	75	506	1	4	6	2	2	8	6	2	4.3	11	3.08
February ...	27.693	27.177	0.516	27.460	70.5	28.5	42.0	49.0	39.1	12.9	42.5	43.4	41.0	38.2	.230	2.7	0.6	81	506	5	3	2	0	3	6	7	2	7.2	16	12.39
March ...	27.618	27.182	0.436	27.445	75.0	38.0	37.0	63.5	45.4	18.1	54.4	55.8	49.5	43.6	.236	3.1	1.8	65	493	2	4	6	2	1	1	9	6	3.7	4	0.97
April ...	27.625	27.108	0.517	27.333	78.0	38.5	39.5	68.3	53.3	15.0	60.8	60.9	53.7	47.4	.329	3.6	2.4	61	486	1	1	3	5	5	8	4	3	5.8	12	3.05
May ...	27.604	27.118	0.486	27.358	90.0	40.0	50.0	75.4	54.0	21.4	64.7	68.0	58.0	46.1	.362	4.0	3.5	52	481	3	1	4	4	1	4	6	8	2.9	4	0.57
June ...	27.472	27.202	0.270	27.346	93.3	48.5	44.8	82.7	60.6	22.1	71.7	75.7	60.5	49.7	.356	3.8	5.8	40	473	8	0	2	4	0	1	5	10	0.7	0	0.00
July ...	27.358	27.161	0.197	27.272	89.8	58.5	31.3	55.5	63.5	22.0	74.5	78.1	61.5	55.1	.435	4.6	5.7	45	469	3	0	0	1	0	5	10	12	0.9	0	0.00
August ...	27.399	27.191	0.208	27.364	99.5	60.0	39.5	88.2	65.3	22.9	76.8	79.5	66.1	57.0	.464	4.9	5.8	45	468	8	3	0	0	0	1	6	13	2.4	0	0.00
September ...	27.560	27.298	0.262	27.462	97.0	59.0	38.0	86.9	65.0	21.0	76.0	73.2	64.4	54.3	.421	4.5	6.2	42	470	5	3	3	0	0	0	6	13	0.8	0	0.00
October ...	27.537	27.323	0.214	27.432	90.0	52.5	37.5	76.2	56.4	19.8	66.3	68.6	57.9	49.5	.356	3.9	3.7	50	470	7	2	6	0	2	1	5	8	2.5	1	0.97
November ...	27.573	27.320	0.253	27.456	75.5	47.5	28.0	67.0	52.4	14.6	59.7	62.5	54.3	47.3	.325	3.6	2.7	57	488	3	1	5	2	1	2	3	5	4.5	4	0.86
December ...	27.617	27.213	0.404	27.447	70.0	40.0	30.0	58.6	47.2	11.4	52.9	53.9	49.9	46.0	.310	3.5	1.2	74	445	5	4	6	2	4	2	6	2	6.1	11	4.29
Means ...	27.556	27.217	0.340	27.388	82.1	45.2	36.9	70.9	53.0	17.9	62.0	64.2	55.1	47.2	.342	3.7	3.4	57	495	sum. 56	sum. 29	sum. 43	sum. 22	sum. 19	sum. 39	sum. 73	sum. 84	3.5	sum. 63	sum. 29.72
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30

SHISHAK'S LIST.

M. MASPERO has lately published a valuable study of this list, which gives about 120 names of places conquered from Rehoboam by Shishak. The following identifications, where marked by a star, are new proposals which occurred to me in studying the subject. Those marked B are given by Dr. Brugsch, M by M. Maspero :—

No. 11.	<i>Kazatu.</i>	(B) Gaza.	<i>Ghuzzeh.</i>
.. 12.	<i>Macidi.</i>	(B) Megiddo.	<i>Mujeddâ.*</i>
.. 13.	<i>Rabbati.</i>	(B) Rabbith.	<i>Râba.*</i>
.. 14.	<i>Taanaku.</i>	(B) Taaanach.	<i>Taanik.</i>
.. 15.	<i>Shaunama.</i>	(B) Shunem.	<i>Sulem.</i>
.. 16.	<i>Bit Shanla.</i>	(B) Beth Shean.	<i>Beisân.</i>
.. 17.	<i>Ruhaiba.</i>		<i>Tell Rehâb.*</i>
.. 18.	<i>Hapurama.</i>	(B) Haphraim.	<i>El Furrîyeh.*</i>
.. 19.	<i>Adulmim.</i>	Idalah?	<i>Huwârâh.*</i>
.. 21. ¹	<i>Shavadi.</i>		
.. 22.	<i>Mahanema.</i>		<i>Mukhnah.*</i>
.. 23.	<i>Kebeana.</i>	(B) Gibeon.	<i>El Jib.</i>
.. 24.	<i>Bit Huarun.</i>	(B) Beth Horon.	<i>Beit 'Ûr.</i>
.. 25.	<i>Kadutim.</i>		<i>Katanneh.*</i>
.. 26.	<i>Aiaulun.</i>	(B) Ajalon.	<i>Yalo.</i>
.. 27.	<i>Makidau.</i>	(M) Makkedah. ²	<i>El Mughâr.</i>
.. 28.	<i>Adiru.</i>	Ataroth Adar?	<i>Ed Dârieh.*</i>
.. 29.	<i>Yudahmalek.</i>	(B) Jehud.	<i>El Yehudiye.</i>
.. 31.	<i>Haanma.</i>		<i>Beit 'Anân.</i>
.. 32.	<i>'Aluna.</i>	Elon.	<i>Beit Ello.*</i>
.. 33.	<i>Bilema.</i>		<i>Bâlîn.*</i>
.. 34.	<i>Zaidi Putir.</i>		<i>'Ain Putîr.*</i>
.. 36.	<i>Bit Aلمات.</i>		<i>Beit Alâm.</i>
.. 37.	<i>Kegali.</i>	Keilah.	<i>Kîla.*</i>
.. 38.	<i>Shauke.</i>	(B) Shokoh.	<i>Shuweikeh.</i>
.. 39.	<i>Bit Tupu.</i>		<i>Taizibeh.*</i>
.. 40.	<i>Abirau.</i>		<i>Bîreh.*</i>
.. 53. ³	<i>Nupilu.</i>		<i>Nûba.*</i>
.. 54.	<i>Dushâti.</i>		<i>Tauwâs.*</i>
.. 55.	<i>Pauru Kitut.</i>	(M?) Gath.	<i>Tell es Safi.</i>
.. 56.	<i>Adoma.</i>		<i>Ed Duweimeh.*</i>
.. 58.	<i>Magdilu.</i>		(M) <i>Mejdel.</i>
.. 59.	<i>Iarra.</i>		(M) <i>Erzeh.</i>
.. 65-6.	<i>Azmon</i>	in the Valley (M).	

¹ No. 20 is defaced. M. Maspero supposes it to be Shechem.

² This I suggested in 1879. Brugsch supposes Megiddo.

³ The gaps in the list are defaced names.

No. 67.	<i>Anari.</i>	<i>El 'Omri?*</i>
„ 68.	<i>Pitiusha.</i>	(M) <i>Futeis.</i>
„ 70.	<i>Arahar-el.</i> (B) Aroer?	' <i>Arâir.</i>
„ 71-2.	<i>Abilama.</i>	
„ 73-4.	<i>Gabri.</i>	(M) <i>el Jabri.</i>
„ 75-6.	<i>Barakit.</i>	
„ 77-8.	' <i>Azai.</i>	
„ 79.	<i>Adidima.</i> Adadah.	' <i>Adâdah.*</i>
„ 80.	<i>Zapaka.</i>	
„ 83.	<i>Ganat.</i>	(M) <i>Jennata.</i>
„ 84-5.	<i>Azamut.</i> (M) Azmon.	
„ 86-8.	<i>Shanaia.</i>	
„ 89.	<i>Haka.</i>	
„ 90-1.	<i>Baruk.</i>	<i>Barûk.*</i>
„ 92-3.	<i>Ashahati.</i>	<i>Esh Shiâkh.*</i>
„ 94-5.	<i>Hanina.</i>	<i>Ghanaim.*</i>
„ 96-7.	<i>Arakad.</i>	<i>Rakâh.*</i>
„ 98.	<i>Adomam.</i>	<i>Dômeh.*</i>
„ 99.	<i>Hanini.</i> Anim.	<i>Ghuwein.*</i>
„ 100.	<i>Adoran.</i> (M) Adoraim.	<i>Dâra.</i>
„ 101-2.	<i>Tulban.</i>	<i>Dilbeh.*</i>
„ 103-4.	<i>Haidoba.</i>	<i>el Hadab.*</i>
„ 105-6.	<i>Haidoba Dinati.</i>	
„ 107-8.	' <i>Arada.</i> (M) Tell Arad District.	
„ 109-10.	' <i>Arada.</i> (M) Arad.	<i>Tell 'Arâd.</i>
„ 111.	<i>Nebatut.</i>	<i>Inbeh.*</i>
„ 112.	<i>Ibrahma.</i>	<i>Baârneh.*</i>
„ 118.	<i>Zabia.</i>	<i>Sâfa.*</i>
„ 120.	<i>Baruc.</i> Berechah.	<i>Breikât.*</i>
„ 121.	<i>Fretima.</i>	' <i>Ain Fâris.*</i>
„ 122.	<i>Abil.</i>	<i>Habeileh.*</i>
„ 123.	<i>Bar Loza.</i>	<i>Wâdy Lôzeh.*</i>
„ 124.	<i>Bit Anati.</i> (B) Beth Anoth.	<i>Beit 'Ainân.</i>
„ 125.	<i>Sharhatan.</i>	<i>Beit Shâr.*</i>
„ 126.	<i>Armaten.</i>	<i>Râmeh.*</i>
„ 127.	<i>Galena.</i>	<i>Jâla.*</i>
„ 128.	<i>Alama.</i>	' <i>Alîn.*</i>
„ 133.	<i>Iura . . .</i> (M) Jerusalem.	<i>El Kuds.</i>

The list begins in Galilee, passes through Samaria, and down the Philistine Plain to the Beersheba Desert, and turns north along the Hebron Hills.

C. R. C.

RECENT HITTITE LITERATURE.

THE question of the Hittites continues to interest scholars, and several new contributions to the literature have appeared, though they can hardly be said to have advanced the question. Most of them are rather general dissertations than serious attempts at decipherment, and most of them make use, without due acknowledgment, of previous materials. Nor do the principles of hieroglyphic writing, or of the syntax which distinguishes Aryan from Mongolic speech, appear to be known to the writers.

M. Halévy sticks to his opinion that no races which used either the cuneiform or the so-called Hittite could have been anything but Semitic; but Akkadian and Media scholars do not accept his opinion. In North Syria, at Merâsh, has been found a statue of Panammu, with a long Semitic inscription. M. Halévy urges that this shows that the Hittites were a Semitic people, because they lived in this region. The Tell Amarna tablets show us, however, that in 1500 B.C. there were Amorites in this region who were Semitic, as well as Hittites (at Rezep) who spoke a non-Semitic tongue. Panammu is a known historic character. He is mentioned in the reign of Tiglath Pilezer II, on an Assyrian tablet¹ (about 745-727 B.C.) as Chief of the Samalli. There is, therefore, no reason to assume that he was a Hittite. The Samalli were no doubt a Semitic people, whose name may be derived from שְׂמָל (Arabic شمال), "the left hand" or "north" (Gen. xiv, 15; Job xxiii, 9).

A volume of 130 pages was published at Brussels in 1891, by M. Leon de Lantscheere, who kindly sent me a copy. It includes a summary of former literature, but several important indications are unnoticed, which have come to light since. The author passes judgment on his predecessors, but his own proposals are confined to the following ("De la race et de la langue des Hittites," p. 95):—

"Certain indications make one think that the language of the proto-Armenians was part of the same group."

It is very generally agreed that the tribes of ancient Armenia and of North Syria, who used the same peculiar script, spoke the same language; but M. de Lantscheere does not tell us what that language was. The language of Media—adjoining Armenia—continued till 500 B.C. and later to be a Mongolic language like Turkish, as is universally allowed since the translation of the third language of Behistun by Sir H. Rawlinson and Dr. Oppert. The language of Mitanni (or Matiène) in 1500 B.C.—spoken in Armenia proper—I think I have been able to show was very close to the Media, and very similar to Akkadian and to ancient

¹ Schrader, "Cuneif. Inscriptns and O.T.," Vol. I, p. 242.

Turkish speech.¹ The language of the Prince of Rezepb, in the same correspondence (from Tell Amarna) appears to be the same, and he calls himself a Hittite. Hence it seems safe to conclude that Hittite was a Mongolic language like Akkadian and Turkish.

Herodotus says (vii, 73) that the Armenians of his time were colonists from Phrygia, and the Phrygians were, he says, Europeans, and apparently Aryans (Briges). The modern language of Armenia is an Aryan tongue, which stands midway between Slavonic and Persian speech. The Phrygians appear to have entered Asia Minor about 800 B.C., but were not the only population. The Carians and Lydians were (judging from the remains of their languages) partly Mongolic—as Dr. Beddoe supposes also on anthropological grounds—and the Lycians appear to have been akin to the Persians. The language spoken at Lake Van was—as I think I have been able to show pretty clearly from grammar and vocabulary—an Aryan language, akin also to Persian, and spoken in the 9th century B.C.² When, therefore, M. de Lantscheere speaks of “proto-Armenians” we gain no definite knowledge till he has defined his terms. Aryan and Mongolic languages belong to distinct classes of Asiatic speech, and both classes are represented in ancient, as they are in modern, Armenia.

At Berlin, during 1892, was published another work, by Priv. Doc. F. E. Peiser, of the University of Breslau. Concerning this, a writer in the Royal Asiatic Society's Journal for April, 1893, says, “We fail to discern a shadow of probability in his elaborate essay at decipherment.” Dr. Peiser, however, appears to have taken some pains to study the question grammatically. He accepts the view which I put forward in 1887, in “Altaic Hieroglyphs,” which had not been then previously proposed by any one: namely, that the language was Mongolic, and akin to Turkish; a view which will, I believe, in the end prevail over others. He proposes a paradigm of the Hittite, as compared with modern Turkish verbs, which appears to me improbable; because the ancient languages of this class—Medic and Akkadian—have a very imperfectly developed verb, and these contemporary languages are more likely than modern tongues to have resembled Hittite grammatically. Dr. Peiser also attributes the inscriptions to the time of Sennacherib, because certain Hittite seals were found in his palace. He seems to overlook the fact that the Cartouche of Rameses II is engraved on the field of the Hittite statue at Mount Sipylos in a manner which shows it to be later than the Hittite text. In this instance it is clear that the Hittite is older than 1360 B.C.; and considering that the Hittite Prince of Rezepb wrote in cuneiform in 1550 B.C., and that Sennacherib destroyed the last remnants of the Hittites at Carchemish, it seems clear that Dr. Peiser's date is far too late, and that the time of their prosperity (from the 14th century B.C. backwards) is a more probable period for the execution of their inscriptions, which are more archaic in character than any others known—not

¹ “Journal of the Royal Asiatic Society,” October, 1892.

² *Ibid.*, 1891.

even excluding Egyptian. If, however, the true method of discovering the sounds of the Hittite, by use of the Cypriote syllabary, were adopted, instead of giving merely arbitrary values to the emblems not founded on comparative study, it is possible that advance might be made in Germany in this study, if the right class of language be compared.

The Rev. C. J. Ball has added a note to my article on the Hittites in the new "Smith's Bible Dictionary," which contains two statements from which I entirely dissent. First, that all the names of Hittites in the Bible are "of a decidedly Semitic complexion," which is asserted in spite of the fact that names like Ephron, Beerî, and Toi, have entirely puzzled great Semitic scholars. And, secondly, that "we do not certainly know the sound of a single Hittite symbol," which ignores the Cypriote comparison which in certain cases is perfectly clear, especially as regards *mo*, *ec*, *ti*, &c. Mr. Ball has long been interested in the subject, and since 1887 has compared the Hittite with Hebrew (*Semite*), with Armenian (*Armen*), and with Chinese (*Mongolie*), so that it is evident that his mind is still open. It is, however, in each case obvious that a considerable historic lapse of time separates the archaic speech in question from these proposed parallels.

Mr. D. G. Hogarth has published in 1893 a long Hittite text of seventy lines; but it is unfortunately so mutilated as to throw little new light on the subject. It is, however, now clear that we already possess the system in its complete state, and that only about 130 signs were used, which renders it improbable that the system was purely ideographic, and makes the search of the syllabic values more hopeful. My views have been supported by Dr. I. Taylor, by Mr. T. G. Pinches, and by Dr. Peiser, while others have contented themselves with leaving the various suggestions put forward without reply.

Two articles on the subject have also appeared in the "Sunday School Times" in America, from Dr. Peter Jensen, of the University of Marburg, who heads his papers (March 25th, 1893, and April 1st, 1893) "A Solution of the Hittite Question," which appears to me to be a somewhat sanguine title. These demand attention, because it has been announced that his discovery is a new one, whereas, on investigation, it appears that he adds no new proposal to the controversy, which may now be said to be confined to a decision between the Mongolic and the Armenian theories.

Dr. Jensen informs us that he has "shared in the attempts to decipher the inscriptions of Mitanni." There is only one inscription written by a King of Mitanni in the native language, and if his "results" have been "but scanty," the reason is, I think, to be found in the fact that he is led to attempt an Aryan comparison. He says that "it matters not who the people were to whom we owe the (Hittite) inscriptions," basing this statement apparently on the fashionable belief that "language is not a test of race." As a fact, the great races of Asia, in our own time, are still distinguished by the same classes of language which distinguish them on the earliest known monuments; and at all intermediate periods of history

they have been so distinguished. The fact that the Hittite type is Mongolic is, therefore, a fair argument in favour of their having spoken a Mongolic language.

Dr. Jensen sees an "Egyptian influence" in the Hittite civilisation, but does not inform us of any details. There were symbols common to Chaldea and Egypt, which were also known to Hittites; but the Hittite art is as distinct from Egyptian as it well could be; and the assertion, therefore, requires proof. The author then proceeds to state that the opinions of Dr. Sayce, Rev. C. J. Ball (he does not specify which of the three views of the latter he intends), Major Conder, and Dr. Peiser are "in fact all without foundation," for which reason it becomes difficult to understand why he reproduces so much of the work of his predecessors, though, as a rule, he omits to notice that this is the case.

Dr. Jensen says that the inquiry includes (1) the analysis of the contents of the texts, and (2) the determination of the phonetic values. This appears to reverse the true problem, and he regards the second part of the inquiry as the more difficult. It will be evident to all that if we did not know the sound of the letters C, A, T, and assumed that the group meant "dog," we should be hindered in discovering that the sound was "cat," especially if we regarded it as being Hebrew or Chinese instead of English. The only basis on which any serious study can rest is on the recovery of the sounds of the emblems, by aid of the Cypriote syllabary, which Dr. Jensen ignores in favour of purely arbitrary proposed sounds, which cannot convince because they are conjectural, and based on the assumption that Hamath, Carchemish, and other cities are probably noticed in the texts.

Dr. Jensen attributes to Dr. Peiser the discovery of the "divider" between words. This I noticed in 1887, and, as I have stated in "Altaic Hieroglyphs," I found while correcting the proofs that I had been forestalled in the proposal by Dr. Sayce. There is nothing new, therefore, in the observation. He continues to state that the "words most probably never underwent modification at their beginning, but only at their end, so that the language of the inscriptions is suffixed." The conclusion is correct, and is one which I argued in 1887: but it is fatal to Dr. Jensen's comparisons with modern Armenian. Armenian is an inflected Aryan language, as every scholar knows, and has no suffixes such as are distinctive of Mongolic languages. In Mongolic speech we do not find "for—a—man," but "man— for"; that is to say, a suffix instead of a preposition. In Armenian the preposition is used as in all Aryan speech. Dr. Jensen thus convicts himself of want of acquaintance with the distinctive grammar of Aryan, as contrasted with Mongolic speech.

The first emblem on the Hamath stones is either a verb or a noun. Dr. Jensen says it means "I am," though in Egyptian (as I have shown in former papers) a very similar emblem means "speech." In suffixing languages, the verb never stands first, though it does in Aryan and Semitic inflected languages. Dr. Jensen, however, says it means "I," with "am" understood, though the emblem *nu* for "I" may be very

easily distinguished in Hittite, and is quite different. He regards the next sign as the "nominative exponent," though in suffixed languages there are two nominatives—definite and indefinite. To me it seems that these four signs mark the plural, being very like the plural emblem in other systems. This is perhaps confirmed by the sound *me*, which may be derived for them from the boss of Tarkondemos, which sound Dr. Jensen wrongly ascribes as a discovery to Dr. Peiser.

The most notable statement in his paper is as follows:—

"It is evident that in the Hittite writing we cannot find a consonant and vowel writing combined with ideographs, and as in the whole series of instances signs are interchangeably used, so that, for instance, for one definite sound there are found three signs, we can hardly speak of it as syllabic writing. For in order to render a syllable such as *ru* they hardly could have used these signs." "This rather indicates that it is a species of consonantal writing, or at least one which lays no great stress on the indication of the vowels."

After such a statement it becomes unnecessary to study Dr. Jensen's proposals in detail. Any scholar, acquainted with Egyptian, or Cuneiform, or Chinese, will see at once that Dr. Jensen has not mastered the rudiments of his subject, and cannot be acquainted with the well-known peculiarities of other hieroglyphic systems. The alphabet was the latest development in a series which began with picture writing, and developed syllabaries before consonants. The number of emblems used by the Hittites is by itself proof that their system was mainly syllabic; but all hieroglyphic systems have used some ideograms to aid the explanation of syllables.

The conjectural signs for "king," "country," "people," &c., which Dr. Jensen proposes, have no value, because they are not based on any knowledge of the syllabic sounds, or on any comparative study, but are purely conjectural. It was not by such means that Champollion obtained the clue to Egyptian, but by painful comparative study, and by recovery of syllabic values.

In his second paper he endeavours to restore the language by aid of Armenian, which, as above mentioned, is not a suffixing language. It may be noted that he reads *Markasi* for *Merash*, which is impossible, and that he ignores the fact that *Tarka* is a well-known Turkish and Mongol word. He asserts that the Assyrians had "no exact equivalent in their writing" for the first letter in the name of Hamath, which only shows his want of acquaintance with Assyrian. Finally, he says that an anthropologist has shown the Jews to be a mixture of "Semites, Indo-Europeans, Amorites, and Alarodian Hittites." The Jews are a purely Semitic people. The Amorites were not Indo-Europeans—their speech was purely Semitic, as is their type on the monuments. The term Alarodian has no racial signification. The (remote) resemblance between Jews and Armenians is due to the ancient infusion of Semitic blood in the veins of the latter, which is indicated also by the use of loan words from Semitic languages in Armenian.

Such considerations lead me to the conclusion that Dr. Jensen is still a tyro in the study of the subject of ancient Asiatic scripts and languages: and that he evolves a system instead of studying such indications as we possess.

The arguments on which I have based my own views have been the following:—1st, the reading of the short bilingual: 2nd, the character of the names of Hittite towns and persons: 3rd, the fact that the verb-forms in the letter of the Hittite Prince of Rezepi are Akkadian: 4th, the character of the Mitanni language spoken in Armenia in 1500 B.C., especially the cases of the noun; and 5th, the sounds of Hittite emblems as obtained from Cypriote. Until these arguments are shown to be fallacious, it appears certain that the Mongolic theory must prevail: especially as Dr. Sayce, Dr. Peiser, and Dr. Jensen, now all agree that we have to deal with suffixing speech: for no Aryan language can properly be so described, and the only suffixing languages of Western Asia are Mongolic. I append a table of those Hittite emblems of which the sound may, I think, be regarded as well established.

C. R. CONDER.

NOTE.

With regard to this table, *Ba* is similar to the Akkadian sign; *Bi* is the Akkadian sign for "two"; *Da* is similar to the Akkadian sign *du*, meaning "to go," represented by the foot. *Es* is the Akkadian value of the sign "three": *Bar* is an "altar" as in Akkadian, and in the text may represent the verb "to be" (Turkish *bar*): *Dim* is taken from the bilingual, and is very similar to the Akkadian *dim*: *Tar* (or *Tark*) is from the bilingual, as is also *Me* which represents the plural sign: *Un* is the sign for "ten" (as in Egyptian and Akkadian) and the Akkadian sound *Un* means "ten" (Turkish *On*): the remaining values are those found in the Cypriote syllabary derived from the Hittite, and from which I believe sprang the Phœnician alphabet. Several other conjectural signs might be added, as *Khat* for "Hittite"—two allies meeting, the word *Khat* meaning "companion": *Dib* or *Dab* "tablet," represented as in Akkadian by a tablet: *Ga* "speech"—a head and neck: *Kha* "bird"—an eagle: *Sak* "head"—a head: *Ab* "camel"—a camel's head; *Is* for the asses' head; *Dib* for the sheep's head; and several others which can only be ascertained when new texts are discovered. These latter are not, however, more than conjectural, but those tabulated depend, not on conjectures, but on comparisons.

Hittite Emblems of Known Sound.

	HITTITE.	CYPRIOTE.		HITTITE.	CYPRIOTE.
1. YA			21. KO		
2. U			22. KHE		
3. YE			23. LU		
4. BA			24. ME		
5. BI			25. MI		
6. BO			26. MO		
7. PA			27. NE		
8. PE			28. NI		
9. PI			29. RA		
10. PU			30. RE		
11. DU			31. RI		
12. TA			32. RU		
13. TE			33. SA		
14. TI			34. SE		
15. TO			35. SI		
6. TU			36. SHI		
17. EN			37. ZO		
18. ES			38. BAR		
19. KA			39. DIM		
20. KE			40. TAR		
			41. ME		
			42. UN		

PALESTINE UNDER THE CRUSADERS.

HERR RÖHRICHT, who is well known as a student of mediæval Palestine, has published a valuable compilation of the contemporary documents, treating of its history from 1099-1292 A.D., including the letters of Popes, Kings, Emperors, and Sultans, and others, with grants to the Church, the Military Orders, and the Italian traders, and with ecclesiastical correspondence from a variety of sources, under the title "*Regesta Regni Hierosolymitani*." He has added excellent indexes for persons, places and things, with a glossary of the peculiar Latin of the time full of Norman and Arabic words, and some from Greek through Arabic; and a list of leading authorities.

After reading through this volume, one document especially struck me, out of the 1,519 contained in it. This is the agreement between Melek el Mansûr and the Masters of the Temple and of the Hospital on June 3rd, 1283, which defines all then left to the Christians between Beirut and Athlit, west of the watershed of Palestine (No. 1450). Two places may be identified on the south-eastern border, which are not noticed in this volume, in which most places are identified, and duly acknowledged as taken from their original discoverers—among whom Herr Röhricht stands pre-eminent, as I have shown in former papers in the *Quarterly Statement*.

One of these places is Haramis, which may be near *Bir Haramis* on the east slope of Carmel, the other is Mansurah, which is evidently the ruin *Mansûrah* near the preceding. This agrees with the fact that Caymont (*Tell Keimân*) was also near the border.

The Casey mentioned in Sir Joseph de Cancy's letter concerning the actions of St. Louis in 1252 A.D. (No. 1,199 of Herr Röhricht's collection), appears to be Tell el Keiz in Wâdy Ghuzzeh. It is described as being between Gaza and Darum, and was the limit of the Turkish advance on Egypt from Aleppo.

C. R. C.

NOTES ON THE QUARTERLY STATEMENT.

Is the last *Quarterly Statement* there is little that is of a controversial nature, but one or two remarks may be of use.

P. 109. It is almost certain that the use of iron in the East dates (as Mr. Bliss supposes) from a very early period. It was certainly known to the Egyptians by its Semitic name (*berzîl*) in 1400 B.C., and it was known yet earlier to the Akkadians by a term which may be read *Dimmir-sa*, equivalent to the Mongol *timirti*, "iron."

P. 125. Mr. Schick is under the impression that I place Calvary at the knoll *west* of Jeremiah's Grotto. Readers of "Tent Work" will

know that this is not the case, and that I have always, since 1878, placed it on the knoll which is now so generally regarded as the actual site—over Jeremiah's Grotto. General Gordon adopted my view, as did Laurence Oliphant, Mr. Selah Merrill, and others; the argument as to the "House of Stoning" being first brought forward in "Tent Work."

C. R. C.

JACOB'S WELL.

By G. ROBINSON LEES, F.R.G.S

On visiting Nâblus for the purpose of photographing the Samaritan Passover ceremony, I called at Jacob's Well, the outward appearance



ENTRANCE TO JACOB'S WELL.

of which has been recently considerably altered. I thought perhaps a photograph of this change might interest the readers of the *Quarterly Statement*, and herewith send one of the entrance, showing where the excavations were made, and another of the site itself.

About six months ago a new Greek abbot took charge of the property, and at once set to work to preserve the site in a manner that will materially benefit his community, and at the same time save it from the ruin that would soon have lost us one of the most authentic sites of the Holy Land. The ground was cleared and excavated on the northern side, where a flight of steps was found leading to the vaulted chamber that was formerly approached with great difficulty through an opening in the earth above. This has been closed, and the chamber over the well



THE SITE OF JACOB'S WELL.

cleared of *débris*, and a door placed at the entrance at the foot of the steps. Several columns were found, and large slabs of stone. There is little more to add, as the chamber is known to have been a chapel used during the middle ages, but for a long time has been exposed to ruin and desolation.

NOTE ON PROFESSOR THEODORE F. WRIGHT'S
INSCRIBED WEIGHT OR BEAD.

By Professor GANNEAU.

AFTER having studied the little stone of which you have sent me an excellent facsimile, I have come to the probable conclusion that it should be read כסף, "silver," and not נזק, as Professor Sayce. This word Keseph is taken here in the sense, which it often has in the Bible, of shekel of silver, shekel. I believe that the hole has been pierced after cutting in the weight by some Mussulman, who put it in a necklace as an amulet. I much desire to know the exact weight of it, with an approximate estimation of the weight lost by piercing the hole.

[The inscribed weight weighs 134 grains ; before the hole was pierced, 156 grains (approximate).—ED.]

LECTURERS.

The authorised lecturers for the Society are—

The Rev. Thomas Harrison, F.R.G.S., Hillside, Benenden, Staplehurst, Kent. His subjects are as follows:—

- (1) *Research and Discovery in the Holy Land.*
- (2) *In the Track of the Israelites from Egypt to Canaan.*
- (3) *Bible Scenes in the Light of Modern Science.*
- (4) *Eastern Palestine.*
- (5) *The Dead Sea and the Cities of the Plain.*

The Rev. J. R. Macpherson, B.D., Kinnaird Manse, Inchtute, N.B. His subjects are as follows:—

- (1) *The Work of the Palestine Exploration Fund.*
- (2) *The Survey of Palestine.*
- (3) *The City of Jerusalem.*
- (4) *Eastern Palestine.*
- (5) *Calvary and the Church of the Holy Sepulchre.*

The Rev. J. Llewelyn Thomas, M.A., Briton Ferry, Glamorganshire, South Wales. His subjects are as follows:—

- (1) *Explorations in Judea.*
- (2) *Research and Discovery in Samaria and Galilee.*
- (3) *In Bible Lands; a Narrative of Personal Experiences.*
- (4) *The Reconstruction of Jerusalem.*
- (5) *Problems of Palestine.*

Professor Theodore F. Wright, Ph.D., Cambridge, Mass., Honorary General Secretary of the Palestine Exploration Fund for the United States. His subjects are as follows:—

- (1) *The Building of Jerusalem.*
- (2) *The Overthrow of Jerusalem.*
- (3) *The Progress of the Palestine Exploration.*

The Rev. L. G. A. Roberts, Hudson Parsonage, Province Quebec, Canada. His subjects are as follows:—

- (1) *Work in and around the Holy City.*
- (2) *Work outside the Holy City.*
- (3) *Popular Lecture upon the General Results obtained by the Fund.*

Application for Lectures may be either addressed to the Secretary, 24, Hanover Square, W., or sent to the address of the Lecturers.

THE PALESTINE EXPLORATION FUND.

NOTES AND NEWS.

Mr. F. J. Bliss's detailed report of his work at Tell el Hesi is nearly completed, and will be published shortly.

Our indefatigable correspondent, Herr Baurath von Schick, sends accounts of recent discoveries at "Tabitha," Jaffa; of Baron Ustinoff's archaeological collection: of observations at the supposed St. Martin's Church, Jerusalem; and of excavations on the rocky knoll west of the so-called "Skull Hill," which have brought to light a remarkable circular wall of reticulated masonry, enclosing a space 80 feet in diameter, and from 10 to 14 feet deep.

The discovery, in the country of the Philistines, of antique metal figures of animals resembling mice, as described by Herr Baurath von Schick, is most interesting in connection with the account in I Samuel. vi, of the sending away of the Ark of God.

The construction of the Haifa-Damascus Railway is proceeding. By the kindness of Mr. Pilling, arrangements have been entered into for archaeological discoveries made in the course of the works to be reported to the Fund, and, if necessary, to be carefully examined. In the present number of the *Quarterly Statement* will be found a note by Mr. Schumacher on some ancient rock-cut wine presses near Haifa.

Much interest has been manifested in Mr. P. Baldensperger's paper on the "Folklore of the Peasants of Palestine," which appeared in our last issue. We are now enabled to publish a paper by the same gentleman on the "Religion of the Fellahin." Both papers are in the form of answers to the "Questions" issued by the Fund.

Mr. Robinson Lees, of Jerusalem, has just made a very interesting journey across Bashan from Amman to Salead *via* Kulat ez Zerka, an account of which will, it is hoped, appear in the next *Quarterly Statement*.

According to the "Jewish Chronicle" of August 11th, "the colonists at Zichron Jacob have given effect to Baron Edmond Rothschild's wish that they should substitute pure Hebrew for Jüdisch-Deutsch as the medium for conversation. They now speak nothing but Hebrew." It will be interesting to watch the progress of this movement. After the Babylonian Captivity, pure Hebrew was never the language of the common people of Palestine. It is said that at Safed, and in less degree at Jerusalem, Jewish children, both boys and girls, may now be heard speaking Hebrew to one another.

The Rev. Theodore E. Dowling, Jerusalem, asks for *reliable* information as to the origin of the "Jerusalem Cross." Four theories of the early history of this cross are current in Jerusalem.

Can any date, prior to that of the Crusading Kingdom of Jerusalem, be assigned to it?

The Rev. Theodore E. Dowling, Hon. Secretary for Jerusalem, who is about starting on a tour in India, has been authorized to receive subscriptions and obtain the names of ladies and gentlemen who are desirous of helping the Committee as Hon. Secretaries. Mr. G. Robinson Lees will act as Hon. Secretary for Jerusalem during the absence of Mr. Dowling.

The crocodile skin from Nahr el Zerka, mentioned in the July *Quarterly*, having been presented to the Fund by Mr. Howard, has been stuffed and fitted with an artificial head, and is now on view at the office of the Fund.

The following is from the "Daily Chronicle":—"The presence of crocodiles in the river Zarka, near Caesarea, has often been a disputed point. It has been alleged that an Egyptian colony transported crocodiles to the spot for the purpose of worship about 400 B.C."

The Rev. Duncan Frazer, of Melbourne, writes that at the north-west shore of the Dead Sea he "saw, in the perfectly clear water, some small minnow-like fishes swimming a few feet from the water's edge." The Rev. Canon Tristram, to whom Mr. Duncan's note was referred, writes that "it is a very familiar fact that *Cyprinodon dispar* live in swarms in the shallow lagoons fed by the warm springs which bubble up through the sand at the north-west end of the Dead Sea. Note in 'Fauna and Flora,' p. 170, will clearly explain the matter."

The "Times" of September 18th contains the following remarks on Mr. Armstrong's new raised map of Palestine:—"After five years of untiring industry Mr. George Armstrong, the Assistant Secretary to the Palestine Exploration Fund, has produced and perfected a work of which he may justly feel proud. A raised map must prove of the greatest interest to all who have visited or intend to visit the tract of country which it represents, affording, as it does, a picture *au vol d'oiseau* of all the physical features. Mr. Armstrong's interesting work will faithfully present to those who have had the advantage of touring in Palestine the old familiar routes they have traversed, and will give to those who have yet to enjoy such a journey a clear idea of the sort of country they may expect to see. The map, which is constructed on the basis of the Surveys of the Palestine Exploration Fund, on a scale of $\frac{3}{8}$ -in. to the

mile, embraces the whole country from Baalbec to Kadesh Barnea, and shows nearly all that is known on the east of the Jordan. The natural features of the country stand out prominently, and show at a glance the relative proportions of the mountains, heights, valleys, and plains. The seas, lakes, marshes, and perennial streams are shown in blue, the watercourses on the plains and the main roads are marked by a grooved line, the Old and New Testament sites in red, and the hills and plains in white. Names are given to the coast and a few inland towns, but other towns are numbered to correspond to a reference list of names. The map measures 7 feet 6 inches by 4 feet. It will, perhaps, be specially interesting at the present time, when railway operations are going on in the country. The course of the new railway from Haifa to Damascus can be clearly traced, and the nature of the country it crosses can be seen at a glance. No doubt, too, the educational use to which the map will be put will be very considerable. Casts in fibrous plaster can now be had."

The Rev. Charles Harris, Milton-next-Sittingbourne, Kent, has been added to the List of Lecturers for the Fund; see p. 268 for subjects.

Index to the Quarterly Statement.—A new edition of the Index to the *Quarterly Statements* has been compiled. It embraces the years 1869 (the first issue of the journal) to the end of 1892. Contents:—Names of the Authors and of the Papers contributed by them; List of the Illustrations; and General Index. This Index will be found extremely useful. Price to subscribers to the Fund, 1s. 6d., post free; non-subscribers, 2s.

After two years' study of the published texts of the tablets found at Tell Amarna, Major Conder has completed a translation of them which the Committee of the Fund have published. In this, as in all their publications, the Committee beg it to be understood that the author alone is responsible for the opinions put forward.

A complete set of the Fund's publications, together with a copy of the new raised map of Palestine, have been sent to the Chicago Exhibition, and will be found in the British Section, Gallery of the Liberal Arts Building, by the side of the Oxford University Extension exhibit.

The Committee have appointed the Rev. Professor Theodore Wright, Hon. General Secretary to the Fund in the U.S.A., to be their representative at the Chicago Exhibition.

The following may be had on application to the Assistant Secretary at the Office of the Fund, viz. :—

Casts of the Tablet with a Cuneiform Inscription found at Tell el Hesi, price 2s. 6d. each.

Casts of the Ancient Hebrew Weight brought by Dr. Chaplin from Samaria, price 2s. 6d. each.

Casts of an Inscribed Weight or Bead from Palestine, forwarded by Professor Wright, Cambridge, Mass., U.S.A., price 1s. each.

Photographs of Tell el Hesi, showing the excavations, price 1s. each.

The Rev. W. M. Teape, 4, Clyde Terrace, Stockton-on-Tees, has kindly consented to act as Honorary Local Secretary.

The translation of the first portion of M. Clermont-Ganneau's work, "Archæological Researches in Palestine," is completed. The second part, it is expected, will be in the hands of the translator soon.

The new railway from Jaffa to Jerusalem has been laid down on the three sheets of the large map. Scale 1 inch = 1 mile. Copies of these sheets are now ready. Price to subscribers to the work of the Fund, 2s. each; non-subscribers, 2s. 6d.

The museum of the Fund, at 24, Hanover Square, is now open to subscribers between the hours of 10 a.m. and 5 p.m., except on Saturdays, when it closes at 2 p.m.

The Committee have to acknowledge with thanks the following donations to the Library of the Fund:—

"Modern Science in Bible Lands." By Sir J. William Dawson, C.M.G., LL.D., F.R.S., F.G.S., &c. Published by Hodder and Stoughton, London. From the Author.

"Jerusalem Illustrated." By J. Robinson Lees, F.R.G.S. Published by Mawson, Swan, and Morgan, Newcastle-on-Tyne. From the Author.

The Committee will be glad to receive donations of Books to the Library of the Fund, which already contains many works of great value relating to Palestine and other Bible Lands. *See list of Books, July Quarterly Statement.*

It may be well to mention that plans and photographs alluded to in the reports from Jerusalem and elsewhere cannot all be published, but all are preserved in the offices of the Fund, where they may be seen by subscribers.

The third and revised edition of "Heth and Moab" is now ready.

A new edition of "Twenty-one Years' Work" is in course of preparation, and will be brought down to date. The new title will be "Twenty-seven Years' Work."

The first volume of the "Survey of Eastern Palestine," by Major Conder, is accompanied by a map of the portion of country surveyed, special plans, and upwards of 350 drawings of ruins, tombs, dolmens, stone circles, inscriptions, &c. The first 250 subscribers pay seven guineas for the three volumes; subscribers to the "Survey of Western Palestine" are privileged to have the volumes for this sum. The price will be raised, after 250 names are received, to twelve guineas. The Committee are pledged never to let any copies be subscribed for under the sum of seven guineas. A. P. Watt and Son, 2, Paternoster Square, are the Sole Agents. The attention of intending subscribers is directed to the announcement in the last page of this number.

Mr. H. Chichester Hart's "Fauna and Flora of Sinai, Petra, and the Wâdy 'Arabah" has been completed and sent out to subscribers.

The books now contained in the Society's publications comprise an amount of information on Palestine, and on the researches conducted in the country, which can be found in no other publications. It must never be forgotten that no single traveller, however well equipped by previous knowledge, can compete with a scientific body of explorers, instructed in the periods required, and provided with all the instruments necessary for carrying out their work. The books are the following (*the whole set (1 to 7 and 9 to 18) can be obtained by subscribers to the Fund on application to the Head Office only (24, Hanover Square, W.), for £3 10s. Od., carriage paid to any part in the United Kingdom only*):—

By Major Conder, R.E.—

- (1) "Tent Work in Palestine."—A popular account of the Survey of Western Palestine, freely illustrated by drawings made by the author himself. This is not a dry record of the sepulchres, or a descriptive catalogue of ruins, springs, and valleys, but a continuous narrative full of observations upon the manners and customs of the people, the Biblical associations of the sites, the Holy City and its memories, and is based upon a six years' experience in the country itself. No other modern traveller has enjoyed the same advantages as Major Conder, or has used his opportunities to better purpose.
- (2) "Heth and Moab."—Under this title Major Conder provides a narrative, as bright and as full of interest as "Tent Work," of the expedition for the *Survey of Eastern Palestine*. How the party began by a flying visit to North Syria, in order to discover the Holy City—Kadesh—of the children of Heth; how they fared across the Jordan, and what discoveries they made there, will be found in this volume.
- (3) Major Conder's "Syrian Stone Lore."—This volume, the least known of Major Conder's works, is, perhaps, the most valuable. It attempts a task never before approached—the reconstruction of Palestine from its monuments. It shows what we should know of Syria if there were no Bible, and it illustrates the Bible from the monuments.
- (4) Major Conder's "Altaic Inscriptions."—This book is an attempt to read the Hittite Inscriptions. The author has seen no reason to change his views since the publication of the work.
- (5) Professor Hull's "Mount Scir."—This is a popular account of the Geological Expedition conducted by Professor Hull for the Committee of the Palestine Fund. The part which deals with the Valley of Arabah will be found entirely new and interesting.
- (6) Herr Schumacher's "Across the Jordan."
- (7) Herr Schumacher's "Jaulân."—These two books must be taken in continuation of Major Conder's works issued as instalments of the "Survey of Eastern Palestine." They are full of drawings, sketches, and plans, and contain many valuable remarks upon manners and customs.

By Walter Besant, M.A.—

- (8) "The Memoirs of Twenty-one Years' Work."—This work is a popular account of the researches conducted by the Society during the twenty-one years of its existence.

- (9) Herr Schumacher's "Kh. Fahl." The ancient Pella, the first retreat of the Christians; with map and illustrations.

By George Armstrong—

- (10) Names and Places in the Old and New Testament and Apocrypha. This is an index to all the names and places mentioned in the Bible and New Testament, with full references and their modern identifications, as shown on the new map of Palestine.
- (11) Besant and Palmer's "History of Jerusalem."—The "History of Jerusalem," which was originally published in 1871, and has long been completely out of print, covers a period and is compiled from materials not included in any other work, though some of the contents have been plundered by later works on the same subject. It begins with the siege by Titus and continues to the fourteenth century, including the Early Christian period, the Moslem invasion, the mediæval pilgrims, the Mohammedan pilgrims, the Crusades, the Latin Kingdom, the victorious career of Saladin, the Crusade of Children, and many other little-known episodes in the history of the city and the country.

- (12) Northern 'Ajlûn "Within the Decapolis," by Herr Schumacher.

By Henry A. Harper—

- (13) "The Bible and Modern Discoveries."—This work, written by a Member of the Executive Committee of the Palestine Exploration Fund, is an endeavour to present in a simple and popular, but yet a connected form, the Biblical results of twenty-two years' work of the Palestine Exploration Fund. The writer has also availed himself of the discoveries made by the American Expeditions and the Egyptian Exploration Fund, as well as discoveries of interest made by independent travellers.

The Bible story, from the call of Abraham to the Captivity, is taken, and details given of the light thrown by modern research on the sacred annals. Eastern customs and modes of thought are explained whenever the writer thought that they illustrated the text. This plain and simple method has never before been adopted in dealing with modern discovery.

To the Clergy and Sunday School Teachers, as well as to all those who love the Bible, the writer hopes this work will prove useful. He is personally acquainted with the land; nearly all the places spoken of he has visited, and most of them he has moreover sketched or painted. It should be noted that the book is admirably adapted for the School or Village Library.

By Guy le Strange—

- (14) "Palestine under the Moslems."—For a long time it had been desired by the Committee to present to the world some of the great hoards of information about Palestine which lie buried in the Arabic texts of the Moslem geographers and travellers of the Middle Ages. Some few of the works, or parts of the works, have been already translated into Latin,

French, and German. Hardly anything has been done with them in English, and no attempt has ever been made to systematise, compare, and annotate them.

This has now been done for the Society by Mr. Guy le Strange. The work is divided into chapters on Syria, Palestine, Jerusalem, and Damascus, the provincial capitals and chief towns, and the legends related by the writers consulted. These writers begin with the ninth century and continue until the fifteenth. The volume contains maps and illustrations required for the elucidation of the text.

The Committee have great confidence that this work—so novel, so useful to students of mediæval history, and to all those interested in the continuous story of the Holy Land—will meet with the success which its learned author deserves.

By W. M. Flinders Petrie—

- (15) "Lachish" (one of the five strongholds of the Amorites).—An account of the excavations conducted by Mr. Petrie in the spring of 1890, with view of Tell, plans and sections, and upwards of 270 drawings of the objects found.

By Trelawney Saunders—

- (16) "An Introduction to the Survey of Western Palestine, describing its Waterways, Plains, and Highlands, with special reference to the Water Basin—(Map. No. 10)."

- (17) "The City and the Land."—A course of seven lectures on the work of the Fund, 2nd edition, with Plan of Jerusalem, according to Josephus, now ready.

- (18) "The Tell Amarna Tablets," including the one found at Lachish. By Major C. R. Conder, D.C.L., R.E.

The new Map of Palestine embraces both sides of the Jordan, and extends from Baalbek in the north to Kadesh Barnea in the south. All the modern names are in black; over these are printed in red the Old Testament and Apocrypha names. The New Testament, Josephus, and Talmudic names are in blue, and the tribal possessions are tinted in colours, giving clearly all the identifications up to date. It is the most comprehensive map that has been published, and will be invaluable to universities, colleges, schools, &c.

It is published in 20 sheets, with paper cover; price to subscribers to the Fund, 24s.; to the public, £2. It can be had mounted on cloth, rollers, and varnished for hanging. The size is 8 feet by 6 feet. The cost of mounting is extra (*see Maps*).

In addition to the 20-sheet map, the Committee have issued as a separate Map the 12 sheets (*viz.*, Nos. 5-7, 9-11, 13-15, 20-22), which include the whole of Palestine as far north as Mount Hermon, and the districts beyond Jordan as far as they are surveyed. *See key-map to the sheets.*

The price of this map, in 12 sheets, in paper cover, to subscribers to the Fund, 12s. 6d.; to the public, £1 1s.

The size of the map, mounted on cloth and roller for hanging, is 4½ feet by 4½ feet.

Any single sheet of the map can be had separately, price, to subscribers of the Fund, 1s. 6d. Mounted on cloth to fold in the pocket suitable for travelling, 2s. To the public 2s. and 2s. 6d.

Single copies of these maps in sheets, with cover, can be sent by post to all foreign countries at an extra charge of 1s.

A copy of names and places in the Old and New Testament, with their modern identifications and full references, can be had by subscribers with either of these maps at the reduced price of 2s. 6d.

New Raised Map of Palestine.—The want has long been felt, and the wish often expressed, that a map showing the physical features of the Holy Land on a scale sufficiently large to show at a glance the relative proportions of the mountains, valleys, plains, &c., should be produced on the basis of the Surveys of the Palestine Exploration Fund.

This has now been accomplished by Mr. George Armstrong, Assistant Secretary to the Fund. The Raised Map embraces the whole country from Baalbek to Kadesh Barnea, and shows on the east of Jordan nearly all that is known. It is a reproduction in bold relief of the recently issued map, on the scale of three-eighths of an inch to the mile.

The seas, lakes, marshes, and perennial streams are in blue, the watercourses on the plains and main roads are marked by a grooved line, the Old and New Testament sites in red, and the plains and hills are in white.

Names are given to the coast towns and a few of the inland ones; the others have numbers corresponding with a reference sheet. The map measures 7 feet 6 inches by 4 feet, and is on view at the Office of the Fund, 24, Hanover Square.

Casts of this Map in fibrous plaster, partly coloured and framed, can be had for £7 7s. by Subscribers to the Fund; to the public, £10 10s.

Photographs of the raised map are now ready. Size, 16½ inches by 8½ inches, price 5s.; 8 inches by 4½ inches, 1s.

Subscribers to the Palestine Pilgrims' Text Society will receive in the course of the month the following translations which have just been completed:—

- (1) Felix Fabri. Part I, vol. II (1484 A.D.).
 - (2) The Itinerary of Bernard the Wise (870 A.D.), and How the City of Jerusalem is Situated (1090 circ. A.D.).
 - (3) Theodosius on the Topography of the Holy Land (530 A.D.).
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Branch Associations of the Bible Society, all Sunday School Unions within the Sunday School Institute, the Sunday School Union, and the Wesleyan Sunday School Institute, will please observe that by a special Resolution of the Committee they will henceforth be treated as subscribers and be allowed to purchase the books and maps (by application only to the Secretary) at reduced price.

The income of the Society, from June 22nd, 1893, to September 18th, 1893, was—from annual subscriptions and donations, including Local Societies, £148 10s. 7d.; from all sources—£312 7s. The expenditure during the same period was £115 10s. 9d. On September 19th the balance in the Bank was £229 6s. 7d.

Subscribers are requested to note that the following can be had by application to the office, at 1s. each:—

1. Cases for binding Herr Schumacher's "Jaulân."
2. Cases for binding the *Quarterly Statement*, in green or chocolate.
3. Cases for binding "Abila," "Pella," and "'Ajlûn" in one volume.

Back numbers of the *Quarterly Statement*.—In order to make up complete sets, the Committee will be very glad to receive any of the following numbers:—

No. II, 1869; Nos. VI and VII, 1870; No. III, 1871; January and April, 1872; October, 1873; January, 1874; January and October, 1875; January, 1883, and January, 1886.

While desiring to give every publicity to proposed identifications and other theories advanced by officers of the Fund and contributors to the pages of the *Quarterly Statement*, the Committee wish it to be distinctly understood that by publishing them in the *Quarterly Statement* they neither sanction nor adopt them.

Subscribers who do not receive the *Quarterly Statement* regularly are asked to send a note to the Secretary. Great care is taken to forward each number to all who are entitled to receive it, but changes of address and other causes give rise occasionally to omissions.

The authorised lecturers for the Society are—

The Rev. Thomas Harrison, F.R.G.S., Hillside, Benenden, Staplehurst, Kent. His subjects are as follows:—

- (1) *Research and Discovery in the Holy Land.*
- (2) *In the Track of the Israelites from Egypt to Canaan.*
- (3) *Bible Scenes in the Light of Modern Science.*
- (4) *Eastern Palestine.*
- (5) *The Dead Sea and the Cities of the Plain.*

The Rev. J. R. Macpherson, B.D., Kinnaird Manse, Inchtute, N.B. His subjects are as follows:—

- (1) *The Work of the Palestine Exploration Fund.*
- (2) *The Survey of Palestine.*
- (3) *The City of Jerusalem.*
- (4) *Eastern Palestine.*
- (5) *Calvary and the Church of the Holy Sepulchre.*

The Rev. J. Llewelyn Thomas, M.A., Briton Ferry, Glamorganshire, South Wales. His subjects are as follows:—

- (1) *Explorations in Judea.*
- (2) *Research and Discovery in Samaria and Galilee.*
- (3) *In Bible Lands; a Narrative of Personal Experiences.*
- (4) *The Reconstruction of Jerusalem.*
- (5) *Problems of Palestine.*

The Rev. Charles Harris, Milton-next-Sittingbourne, Kent—

- (1) *Modern Discoveries in Palestine.*
- (2) *Stories in Stones; or, New Light on the Old Testament.*

Professor Theodore F. Wright, Ph.D., Cambridge, Mass., Honorary General Secretary of the Palestine Exploration Fund for the United States. His subjects are as follows:—

- (1) *The Building of Jerusalem.*
- (2) *The Overthrow of Jerusalem.*
- (3) *The Progress of the Palestine Exploration.*

The Rev. L. G. A. Roberts, Hudson Parsonage, Province Quebec, Canada. His subjects are as follows:—

- (1) *Work in and around the Holy City.*
- (2) *Work outside the Holy City.*
- (3) *Popular Lecture upon the General Results obtained by the Fund.*

Application for Lectures may be either addressed to the Secretary, 24, Hanover Square, W., or sent to the address of the Lecturers.

ANNUAL MEETING.

THE Annual Meeting of the General Committee was held at the Rooms of the Fund, 24, Hanover Square, on Tuesday, July 18th, 1893.

James Glaisher, Esq., F.R.S., occupied the Chair.

Among those present were W. Aldis Wright, Esq., LL.D. ; Basil Woodd Smith, Esq. ; Lieut.-Col. C. M. Watson, C.M.G., R.E. ; William Simpson, Esq. ; J. D. Grace, Esq. ; W. Morrison, Esq. ; Professor Edward Hull, F.R.S., LL.D. ; Henry Maudslay, Esq. ; H. C. Kay, Esq. ; the Rev. A. Löwy ; F. J. Bliss, Esq., &c.

THE ASSISTANT SECRETARY read the following Report of the Executive Committee :—

GENTLEMEN,

In resigning the office to which they were appointed at the last Annual Meeting of the Fund your Executive Committee have the honour to render the following account of their labours :—

They have held twenty-one meetings for the transaction of business.

The Excavations at Tell el Hesi (Lachish), begun by Professor Flinders Petrie in the spring of 1890, and continued by Mr. F. J. Bliss in the following year, were closed in December last (1892). During that period the earth of a third of the huge mound was cleared away to a depth of 60 feet, revealing the foundations of portions of eleven separate towns, one above the other.

Great quantities of potsherds were removed and every piece examined, but only a few had marks on them ; numerous pots of various sizes, lamps, heads, scarabs, cylinders, idols, bronze and iron implements, consisting of spearheads, battle-axes, edges, chisels, punches, needles, hair-pins, nails, knives, pincers, blow-pipes, sickles, &c.,—some beautiful specimens of flint implements, stone balls, a store of burnt barley, a wine-press, and a furnace were found, but the greatest find of all was a small clay tablet having a cuneiform inscription on both sides of it, being in shape and form of letters identical with the tablets found at Tell el Amarna. All these finds have been reported and fully illustrated in the *Quarterly Statement*.

The tablet with the cuneiform inscription has aroused additional interest in the work of the Society. A transliteration and translation of the inscription by Professor Sayce will be found in the January *Quarterly Statement* of this year, and another is given by Major Conder in his translation of 176 letters of the "Tell Amarna Tablets," published in the early part of this year.

The Firman for excavating expired in March last, and as the final report from Mr. Bliss was against continuing the researches at Tell el

Hesy, your Committee decided to apply for a new Firman to dig elsewhere. Negotiations are still going on, and it is hoped that a favourable reply will be received soon.

In the interval Mr. Bliss came to England to recruit his strength after the severe attack of typhoid fever he has undergone. He is now engaged in writing a full report of his work, which will be published in the autumn. On Tuesday, June 6th, at 20, Hanover Square, under the auspices of your Committee, Professor Petrie in the Chair, Mr. Bliss gave an account of his work at Lachish. The meeting was well attended and the lecturer was cordially thanked for his interesting lecture.

Herr Schick continues his researches in Jerusalem and reports on fresh discoveries as they occur. He has made a thorough examination of Acedama and drew a plan and section of the place, and a thorough examination and plan of the "Tombs of the Prophets" which are now the property of the Russians. His paper on the second wall will be read with much interest; and he has given a list of the technical terms in Arabic, used for tools, materials, and modes of building.

At the ruins of Jubeiah, between Kulonieh and Kustul, two standing stones with grooves were found which are similar in construction to those found near Deir Aban, probably the remains of some olive or wine-press.

A stone (soft Mizzeh) weight with an inscription on it, supposed to be a talent, was found by the Algerine Brethren at St. Ann's.

Mr. Schick reported that no discoveries of any importance whatever were made during the construction of the railway from Jaffa to Jerusalem. (A map showing the course of the line will be found in the *January Quarterly Statement*.)

Considerable progress has been made with the Akka-Damascus Railway—five miles of rail have been laid down along the foot of Carmel from Haifa, no discoveries of an archaeological nature have been made as yet, but there is every reason to expect that the construction of this great railway will unearth many buried places and objects of the greatest interest.

Dr. Chaplin reports that the plaster with ancient frescoes has been removed from the walls of the Church of the Convent of the Cross at Jerusalem, and destroyed.

The Rev. J. E. Hanauer reports further discoveries of mediæval remains in the Mosque near the Great Synagogue of the Perushim Jews which he and Mr. Schick believe to be the ruins of the Church of St. Martin. Other remains west of the Damascus Gate are suggested to have belonged to the "Maladrerie" or Lepers' Hospital of the Middle Ages.

The Rev. Theodore E. Dowling reports that the Jerusalem Branch Association of the Fund has secured a room within and near the Jaffa Gate, where maps and all publications of the Society can be seen and purchased.

During the tourist season Lectures were delivered in Jerusalem for the benefit of travellers and others by the following members of the Fund :—

	Subject.
The Rev. A. Hastings Kelk, M.A.	"Walks about Jerusalem."
The Rev. John Zeller	"The Druzes."
The Rev. J. E. Hanauer	"The Walls and Gates of Jerusalem."
G. Robinson Lees, F.R.G.S.	"The Temple Area."

A further series of Lectures is in preparation for the next season.

We have received a large number of inscriptions collected at various mines in the Hauran by the Rev. W. Ewing during his travels there. These are in the hands of Professor Ramsay, of Old Aberdeen.

Your Committee are much indebted to Dr. Murray, of the British Museum, for valuable assistance rendered in the translation of Greek inscriptions.

Mr. G. Robinson Lees, F.R.G.S., sends photographs of a Greek inscription found over the door of a tomb near the Garden of Gethsemane, which Dr. Murray, of the British Museum, has translated : of a piece of mosaic pavement found on the Mount of Olives close to the base of "The Tower," with descriptive notes : he also mentions that some very fine specimens of glass, pottery, lamps, and a beautiful carved head had been unearthed at Caesarea.

At "Jacob's Well," which Mr. Lees visited lately, he found the place considerably altered in appearance ; some *debris* had been cleared away and the ruins were in the charge of a Greek abbot, who had done something towards preserving them.

The Rev. George E. Post's description of his researches in a journey to Palmyra was completed in the April number of the *Quarterly Statement*.

In the current number he contributes a narrative of his researches in the Lebanon, Anti-Lebanon, and Damascus. Each paper has a valuable list of plants collected on the way.

Mr. Alexander Howard, the well-known tourist contractor, presented to the Museum of the Fund the skin of a crocodile, which was killed by the natives in the marshes at Nahr ez Zerka, south of Haifa ; the Fellahin ate the flesh and preserved only the skin without the head and feet ; the skin measures 7 feet 6 inches ; with the head it would measure probably over 9 feet.

Mr. Baldensperger has furnished a most interesting paper in reply to "Questions" on the Folklore of Palestine. Mr. Baldensperger has lived many years in close contact with the natives, and has had a rare opportunity to collect the information which he gives.

Your Chairman has completed his exhaustive tabled records of the Meteorological Observations, recorded by Herr Dreher, at Saron, Jaffa, during the ten years, 1880-89, inclusive. These records contain a mine of information on the subject.

Mr. Glaisher is now engaged on the observations recorded at Jerusalem, beginning with the year 1882, and with those of Tiberias, beginning 1891, taken by Dr. Torrance.

Your Committee mentioned in the last Annual Report that much attention had been given to the tomb situate at the foot of the hill over Jeremiah's Grotto, believed by the late General Gordon to be the tomb of Our Lord.

A lengthened correspondence was published in the "Times" on this tomb. The subject being of great interest, a selection of the principal letters, together with the "Times" leader, was reprinted in the January *Quarterly Statement*.

In addition to this correspondence, the papers on the subject by Herr Schick, who has lived, studied, and worked in the Holy City for over 40 years, and a paper by the Rev. J. E. Hanauer, have been read with great interest.

Mr. Schick states, "My conviction is that the question of the real Calvary will never be satisfactorily settled by controversy, *but only by excavation.*"

A summary of the papers on this subject, published in the *Quarterly Statement* and other publications, was also given.

Your Committee are pleased to say that the Museum of the Fund is much appreciated. Many subscribers and visitors avail themselves of the opportunity to inspect the various objects.

Since the date of the last Annual Meeting 219 new Subscribers have been added to the list, and 125 have been taken off through death and other causes, leaving an increase of 94 new Members.

The new line of railway from Jaffa to Jerusalem has been laid down on the one inch to a mile scale sheets, and copies can now be had.

The first part of M. Gaumeau's archaeological researches in Palestine has been translated, and it is expected that the second part will be in the hands of the translator at an early date.

A new edition of the Index to the *Quarterly Statements* has been compiled. It includes the years 1869 (the first issue of the Journal) to the end of 1892. The Contents are:—Names of the Authors and the Papers; List of the Illustrations; and General Index. This Index, it is hoped, will be found extremely useful.

A new and revised edition of "Heth and Moab" was issued early in the year.

The "Tell Amarna Tablets," by Major Conder, was also published in the beginning of this year. It contains the translation of 176 letters of the 320 cuneiform tablets found at Tell el Amarna, which are chiefly from Palestine and Syria.

"The City and the Land" was published in the autumn. It contains the seven lectures delivered in the spring of last year. Both these works have had a very fair reception.

Your Committee have pleasure in reporting that the long promised Raised Map of Palestine, the work of the Assistant Secretary to the

Fund, Mr. George Armstrong, is now completed, and that copies of it can be had in fibrous plaster, framed and coloured. It has been a work of great labour, occupying about four and a half years. The altitudes and formations are accurately based on contours of 100 feet gradations, calculated from the scientific survey, thus showing at a glance the whole features of the country.

A list of the books in the Library is published in the July *Quarterly Statement*.

During the past year the following donations to the Library have been acknowledged with thanks to the donors :—

“Har Moad, or Mountain of the Assembly,” by Rev. O. D. Miller, D.D.

“Voyage en Syrie et en Egypte,” per M. C. F. Volney, 2 vols., from Dr. Chaplin.

“Plantæ Postiana,” Fasciculi I–IV, from the author, Dr. Post.

“The Land of Promise,” by H. Boner, D.D., from J. A. Eastwood, Esq.

“The Holy City, Jerusalem; its Topography, Walls, and Temples,” from the author, S. Russell Forbes, D.D.

“The Temple of Ezekiel’s Prophecy,” from the author, Henry Sulley.

“Forty Days in the Holy Land,” from the authoress, Elizabeth Harcourt Mitchell.

“The Everlasting Nation” (in 4 vols.), from the editor, Rev. A. A. Isaac, M.A.

“The Fifth Gospel,” from the author, J. M. Potts, D.D., LL.D.

Your Committee have sent a complete set of the Society’s publications, together with a copy of the raised map, to the Chicago Exhibition. The exhibits will be found in the British Section, Gallery of the Liberal Arts Buildings, by the side of the Oxford University Extension Exhibit.

The Rev. Professor Theodore F. Wright, Hon. General Secretary and Lecturer for the Fund in the U.S.A., has been appointed the Society’s representative at the Chicago Exhibition. The Rev. Dr. Waterman, Hon. Secretary for Chicago, has kindly offered to render every assistance.

The Rev. J. R. Macpherson, B.D., Kinmaird Manse, Inchtute, N.B., has been appointed Lecturer for the Society in Scotland.

The Rev. L. G. A. Roberts has been appointed Lecturer for the Fund in Canada.

Your Committee have pleasure in recording their best thanks to their Honorary Secretaries, who render such valuable assistance without any remuneration whatever.

Since the last Annual Meeting the following papers have been contributed to the *Quarterly Statement* :—

By Herr Baurath Schick—

“Description of Aceldama,” with various References and Plans;

“Ancient Stone Weights found by the Algerine Brethren of St.

Ann's"; "New Sewer Near the Church of the Holy Sepulchre"; "The Railway from Jaffa to Jerusalem," with Map; "On the Site of Calvary"; "Reflections on the Site of Calvary"; "The Tombs of the Prophets"; "The Course of the Second Wall"; "Arabic Building Terms"; "The Ruins of Jubeiah."

By W. St. Chad Boscawen—

"The Tell el Amarna Tablets in the British Museum."

By the Rev. J. E. Hanauer—

"On the Controversy regarding the Site of Calvary"; "Mud Showers, and their Effect on Buildings in Palestine"; "St. Martin's Church and other Mediaeval Remains."

By the Rev. Haskett Smith—

"Identifications Suggested in Murray's Handbook."

By the Rev. W. F. Birch—

"Ancient Jerusalem."

By the Rev. Canon Brownlow, M.A.—

"Identification of Saints in the Maronite Calendar."

By Surgeon-General Hutchinson, M.D.—

"The Tomb of Our Lord."

A reprint from the "Times" of the correspondence on the Site of the Holy Sepulchre.

By F. Robinson Lees, F.R.G.S.—

"Antiquities from Caesarea"; "Tomb with Greek Inscription Near Garden of Gethsemane"; "Mosaic Pavement on the Mount of Olives"; "Jacob's Well."

By F. J. Bliss, B.A.—

"The Excavations at Tell el Hesry during the Spring and Autumn of 1892," with numerous Illustrations.

By the Rev. Professor Sayce, LL.D.—

"The Cuneiform and other Inscriptions Found at Lachish and elsewhere in the South of Palestine"; "On an Inscribed Bead from Palestine"; "The Site of Kirjath-Sepher"; "The Phœnician Inscriptions on the Vase Handles found at Jerusalem."

By James Glaisher, F.R.S.—

"On the Strength or Pressure of the Wind at Sarona, recorded Daily by Herr Dreher in the Ten Years, 1880-89"; "Meteorological Report from Jerusalem for the Year 1882."

By Chas. Fox, M.R.C.S., F.S.S.—

“The Latitude of Mount Horeb”; “Notes and Queries.”

By Major Conder, D.C.L., R.E.—

“Sinai and Syria before Abraham”; “Notes on Shishak’s List”; “Recent Hittite Literature, &c.”

By Philip J. Baldensperger—

“Peasant Folklore of Palestine” (Answers to Questions).

By Rev. George E. Post, M.A.—

“An Expedition to Lebanon, Anti-Lebanon, and Damascus,” List of Plants Collected.

Since the last Annual Meeting the undernoted gentlemen have kindly consented to act as Honorary Local Secretaries:—

Rev. H. B. Waterman, D.D., 3436, Rhodes Avenue, Chicago.

„ W. Bailey, Colney Heath Rectory, St. Albans.

„ Robert Campbell, St. Margaret’s Manse, Dunfermline.

„ Robert Edmund Parr, West Hartlepool.

„ E. H. Cross, D.D., Belvedere, Trinity Road, Folkestone.

„ W. Early, Hadley, Wellington, Salop.

„ J. M. Otts, Greenboro’, Ala., U.S.A.

„ S. F. Maynard, Gressingham Vicarage, Lancaster.

„ G. G. S. Thomas, 2, Princes Terrace, Ripon.

„ P. A. Gordon Clark, West Free Church, Perth.

„ J. T. Barber, Falls Church, Va., U.S.A.

„ Frank P. Miller, Litchfield, Ill., U.S.A.

H. S. Noblett, Esq., Ashton Place, Cork.

Rev. Geo. W. Baile, B.A., 17, Upper Sackville Street, Dublin.

„ Robert Macpherson, B.D., The Manse, Elgin.

„ J. R. Macpherson, B.D., The Carse of Gowrie, Perthshire.

„ Wm. Gillies, The Manse, Timaru.

E. F. J. Love, Esq., B.A., Queen’s College, University of Melbourne.

We record with great regret the deaths of the following members of the General Committee since last Meeting:—

Dr. Carl Sandreczki.

Henry S. Perry.

The Dean of Lichfield (Rev. C. H. Bickersteth).

W. H. Freeland.

His Grace the Duke of Sutherland.

Colonel G. E. Grover, R.E.

Sir William Mackinnon, Bart.

Your Committee have pleasure in proposing that the following gentlemen be elected members of the General Committee :—

The Bishop of Chester.
 The Dean of Chester.
 The Bishop of Lichfield.
 The Bishop of Durham.
 The Bishop of Carlisle.
 The Bishop of Bath and Wells.
 The Dean of Canterbury.
 The Rev. Canon Cheyne.
 The Rev. Canon Driver.
 The Rev. Daniel Bliss, D.D.
 Rev. Professor A. F. Kirkpatrick.

The following is a summary of the receipts and expenditure for the year ending 1892. The balance sheet was published in the April *Quarterly Statement* :—

At the end of 1891 there was a balance in the bank of £314 6s. 3*d.*. The income from donations and subscriptions for the year was £1,690 14s. 6*d.* ; proceeds of lectures £104 9s. 3*d.* ; sales of publications £644 14s. 1*d.* ; for damage by fire to books the Northern Insurance Company paid £150.

The expenditure in the same period was, for exploration £853 6s. 7*d.* ; for printing, binding, lithographs, photos, illustrations, &c., £838 9s. 8*d.* ; for management—including rent, salaries, wages, advertising, insurance, stationery, &c., £665 10s. 2*d.*. The posting and carriage of the *Quarterly Statement*, books, maps, parcels, &c., costing £133 6s. 9*d.*

At the end of 1892 the balance in the bank was £413 10s. 11*d.*

The CHAIRMAN said :—I think the Report will be considered to be very satisfactory. Hitherto, at our Annual Meetings, it has been my privilege to speak of the gentlemen who were working for us. They were usually far away, and last year, when Mr. Bliss announced the discovery of the tablet, he was very ill, and your warm sympathies were extended to him. I need say very little about him to-day, for we have Mr. Bliss himself with us (applause), and instead of my speaking of his labours I would rather that he should himself tell us of what he has done, and of other matters which will be of interest to this Meeting. (Applause.)

Mr. BLISS.—Three years ago, at this Meeting, Dr. Petrie gave an account of his *reconnaissance* at Tell el Hesi. Of course at this mound—which is 60 feet high, 200 feet square at the top, and about 350 at the base—a work occupying only six weeks could necessarily have been conducted only by shafts and cuttings. Dr. Petrie was not even able to work at the top of the mound, because it was covered with crops, the removal of which would have been very expensive. He, however, came to the general results that we had here the city of Lachish, the lowest

and most ancient town at the base, being of somewhere about the seventeenth century B.C., representing the Amorite constructions before the time that the Israelites had come into Palestine, and the top of the mound representing the fifth century B.C., when Lachish disappeared from history. These results, definite as they seemed to be, were attained, not from any inscriptions, but mainly from the successive fortifications, together with the pottery, which he found. His results, while accepted by many people, were doubted by others. It was said that the time that he had, and the materials that he worked from, were not sufficient to attain such definite results. My work occupied four seasons, extending over two years. All that could be gained from shafts and pits, and cuttings, had been learned by Dr. Petrie's work; therefore, nothing remained for me to do but the arduous task of cutting down the mound. I found that to cut down the whole mound, and carefully to examine it all, would be too much, so I decided to cut out one-third of it, layer by layer, which involved the removal of more than 500,000 cubic feet of earth. When you remember that we found needles—and indeed smaller objects—you may imagine what a tremendous task it was. I soon found that the hill consisted of layers, and that the base of each layer could be determined by the foundation of the mud-brick buildings as they appeared. I uncovered the bases of eight towns, and, as my plans and photographs will show, these were actually traced and measured. Besides these, there were three others unplanned, making 11 in all. This, of course, was the main result of my work, and it is a far more important result than would be at first supposed. This, I believe, was the first time that a Tell had been systematically cut down, before the strata were harmed by cuttings, and with all the objects marked according to their different levels. Signs which indicated the undisturbed strata in this Tell will justify us in inferring a similar stratification in other Tells, if such signs are found in an examination of their sides. Thus we will be saved the task of enormous cuttings. Once prove that dateable objects are found *in situ*, and we have a key which may open up the chronology of the various strata. Now, in examining these different strata, I am sorry to say that I came across only a number of mud-brick buildings, of no architectural importance. We found, however, the base of a large hall, which probably consisted of three large rooms, the whole covering a space of 100 feet by 40 feet, with the bases of pillars which probably supported the roof, giving us a large hall with passages, and the rooms sub-divided by columns. We also found a wine-press, with the various pits that would be necessary for the making of wine; and we also found a furnace, which has caused a great deal of discussion. At first we thought it was a smelting furnace, but all that we can be sure of, now that the matter has been carefully investigated, is that this was some ancient furnace, perhaps merely for pottery. In order to date the various strata we had to study all the finds. The tablet, which has been referred to, which was found in the third town, under a great layer of ashes, dated this town at 1450 B.C.

I cannot here go into details, but only affirm that all our objects taken independently, have come to establish in general, with a few modifications, the chronology which Dr. Petrie so cleverly inferred, which I think is a wonderful confirmation.

I am inclined to think that the first town was more ancient than was supposed by Dr. Petrie. This, however, is uncertain, as no dateable objects were found under the third town.

A MEMBER OF THE COMMITTEE.—Did you get down to the rock?

Mr. BLISS.—I got down to the original earth. Now, the question of identification will, of course, interest you. Dr. Petrie identified the place as Lachish from certain considerations. These considerations have been confirmed by my work, but I am sorry to say that I cannot add any new proof. Tell el Nejileh and Tell el Hesi are probably Eglon and Lachish.

They are three miles from each other, but until the spade has been put into Tell el Nejileh we cannot be perfectly sure which is which.

And now a word in regard to the history of the exploration. I suppose we had a good many hardships, but these I don't particularly remember, because we have so many delightful memories. Our relations with the Government were most friendly. The official appointed by the Governor of Jerusalem to conduct the work was a gentleman, and in all his relations to me he was honourable and helpful, and I may also say that we were on very good terms, not only with the Governor of Jerusalem, but with the local government. Our friends, the Arabs, who surrounded us, are real genuine friends, who would be glad to have us come back and camp side by side. With the workpeople I was also greatly pleased. Of course it was necessary to be firm, but I hope that I am a considerate master at all times. The work they did was considered good. If you know just how to manage these people it is very easy to get a lot of work done; it is also very easy to have a lot of lazy people about you. On the whole, we got very satisfactory work. My father's testimony as to the labour is of course a very good one, as he is President of a large college that has been building for over 20 years, and has employed all sorts of labourers. And he, after a short stay with me there, was very much astonished at the amount of work that our people did. Of course, we had a good deal of risk in the climate. The place was very unhealthy in the autumn, on account of the stagnant water lying in the stream, just by the Tell, which, by the way, was doubtless the place where Philip baptized the Ethiopian. During the autumn it was extremely discouraging. We had guard after guard fall ill, and workman after workman, and servant after servant, and the only one who kept well was myself. But in the spring I contracted typhoid fever, from which I happily recovered. I should like, in closing, to say how much I appreciate the feeling of sympathy and the hearty and cordial co-operation evinced by the Committee. Any request that I have made has been promptly considered and answered. (Applause.) Having lived so long abroad, I know what all sorts of Committees are, and what delay means, but I have never had my work delayed from one post to another, because everything

has been at once responded to, and I must say it has been a cause of great thankfulness to me, and I would wish, Mr. Chairman, to thank you for the great kindness you have shown to me and my work. I should like to say further, that it is a pleasure to me to hear that this tablet, which I found, has really been seen by Dr. Chaplin, in the Museum at Constantinople. This, I hope, will be solid proof to the Turks that we mean to work honourably with them.

The CHAIRMAN.—If any gentleman has any remarks to make upon the Report, I shall be glad to hear him.

Mr. LOWY.—Mr. Chairman, and gentlemen, I take the liberty of calling attention to a matter which I consider of the highest importance to this Committee. Two years ago I suggested that there should be delivered lectures in order to attract public attention to the useful work done by the Palestine Exploration Fund, and I believe that we have now the satisfaction of knowing that the public have gradually been induced to take a considerable interest in the glorious work undertaken by our Society. I take the liberty of repeating the suggestion which I made on that occasion, and I believe that it would be extremely useful to have, not many lectures, not for instance every week, because people are very much occupied in London—but, say, four lectures delivered during three or four months. I think the Palestine Exploration Fund is worthy of more public recognition. It has thrown an immense flood of light upon the history which is buried in the ground, and therefore it is desirable that we should take measures in order to draw educated people towards the work which is being done. And I think it is only necessary to give information to the people who are interested in the history of the East to attain this object. But there is also another thing which has to be borne in mind—the more money we make, the more good we will be able to do. Therefore I respectfully submit that courses of lectures should again be given in order that London, and England, may be made acquainted with the great work that is being done. The Report which has been read is full of interesting matters. It is proof of the work that has been done, and I hope, as we have begun so we shall continue. I conclude these remarks with a question: Are there other Tells in the neighbourhood which could be explored? I am asked, gentlemen, to move the adoption of the Report, which I do with the greatest pleasure.

Professor HULL.—Mr. Chairman, and gentlemen, may I be allowed to second this resolution? I have great pleasure in doing so. The Report is full of interest, and it gives an account of most admirable work done during the past year, not only at Tell el Hesi, by our friend Mr. Bliss, but also of other and good work, particularly the model of Palestine; and I sincerely congratulate the Committee and Mr. Armstrong, who have devoted so much time to this work, upon the results achieved. I think it is a beautiful work, and accurately represents the physical features of the country, of which I have some slight knowledge. I have very great pleasure in seconding the resolution.

The CHAIRMAN then put the resolution, and it was carried unanimously.

The CHAIRMAN.—With respect to the question asked about more Tells—there are many. But the law of Turkey is that we can only work at one place at one time. I hope, however, that any further applications we make will be granted. I don't know whether Mr. Bliss has anything further to say with regard to this question?

Mr. BLISS.—I think you have replied to it, Mr. Chairman.

The CHAIRMAN.—Gentlemen, I think now I ought to say that we are indebted to our Honorary Secretary, who is not here. He has been for some time in Chicago, being a delegate from the Authors' Society, giving his views upon the question of copyright and as to the friendliness between authors and publishers here and authors and publishers in America—a very ticklish subject indeed, and I will say no more about it. (Laughter.) I should like to ask you to give a hearty vote of thanks to the Honorary Secretary, because he is willing always to work in your interests, at all seasons. I am sure you will carry that vote of thanks with acclamation.

The vote was cordially endorsed by the Meeting.

The CHAIRMAN.—Then, there is our friend the Treasurer, who not only receives the money, but who goes through every item of the accounts with a care and skill that is indeed wonderful. In fact, he looks after every penny. I am sure, gentlemen, we are deeply indebted to Mr. Morrison, and should also give him a vote of thanks.

The vote was unanimously accorded.

The CHAIRMAN.—Then, there is Mr. Armstrong; I must say a word about him. I sometimes think that he is overworked. After leaving the office at times I think this, and I sometimes want to suggest that a little more assistance should be given him, and really, if the work increases, some assistance will have to be given to him, but, as it is, the work has been done well and admirably, and therefore, I am sure you will thank him for the admirable way in which the work has been done. (Applause.)

The vote was carried.

The CHAIRMAN.—Then, gentlemen, I think Mr. Bliss is indeed worthy of our thanks. You have heard to-day his very lucid statement, and the excellent results achieved by his work. I have to ask you to thank him, and also Mr. Schick, who is very good to us in the matter of collecting and sending to us information. Such a person in Jerusalem is most valuable, and I must ask you also to accord him a hearty vote of thanks.

The vote of thanks to Mr. Bliss and to Mr. Schick of Jerusalem was unanimously accorded.

The CHAIRMAN.—Then, gentlemen, you have just heard from Mr. Bliss about the kindness of the Governor of Jerusalem, and of his usefulness to us. It is a pleasing thing to find the Turks work hand in hand

with us, and I therefore have to ask you that you should give a hearty vote of thanks to the Governor of Jerusalem.

The vote was accorded.

The CHAIRMAN.—Will you convey that to the Governor of Jerusalem, Mr. Bliss?

Mr. BLISS.—I will, Mr. Chairman, with great pleasure.

The CHAIRMAN.—Then, in Jerusalem, we have Mr. Lees and the Rev. J. E. Hanauer, who have given us very much help, and I would propose that we give a hearty vote of thanks to them.

The vote was accorded.

Mr. MAUDSLAY.—Mr. Chairman, and gentlemen, I have myself been in Jerusalem, in the years 1873, 1874, and 1875, and I there saw the good work done by this Society. I think under the circumstances, therefore, that those whom the Chairman has chosen to work with him should be re-elected upon the Executive Committee. I should like to say also a word about the accuracy of the work which has been done in Palestine, and we should not forget to appreciate the excellent work done by the officers sent out by the Government, which work has been found to be very correct. I wish also to move a vote of thanks to the Executive Committee for the good work they have done.

Mr. LÖWY.—I have great pleasure in seconding that. I am much obliged to the managers of this Society for the good work they have done.

The resolution was carried with acclamation.

Professor HULL.—I have to move a special vote of thanks to our Chairman, as we all know how heartily and how earnestly he works, and how well the Society has prospered under his auspices. I have, therefore to move that the hearty thanks of the general Committee be given to our able and worthy Chairman. (Applause.)

Mr. LÖWY.—I have the greatest possible pleasure in seconding that.

The resolution was carried unanimously.

The CHAIRMAN, in reply, said:—I thank you very much, indeed, gentlemen, for the recognition you have given to my work in connection with this Society. I take very great interest in the work. I feel that I want more Tells opened, and I think in a short time we shall be able to go on with our work very well indeed. One of the best things in connection with this Society at the present moment is that we have never yet heard of anything that has been published by us that the public have not taken as being true. (Applause.)

The proceedings then terminated.

LETTERS FROM HERR BAURATH VON SCHICK.

I.—OLD JERUSALEM, AN EXCEPTIONAL CITY.

IN one of my former reports I said that the city of Jerusalem, built after the Captivity, was in many respects different from other cities in the country ; as, for instance, there were no private houses, the whole being an establishment of the Jewish State. Having been asked to give some proofs of this assertion, I will do so as briefly and clearly as I can.

1. If one studies carefully the history of this remarkable city, so exceptional in many things, one comes to the conclusion that the city must have been an establishment of the State, and hence private houses had no place.

2. The law and custom that every grown-up male had to go three times in the year, on the days of the feasts, to stay there, implies that there must have been lodgings for such a great number of people, so that there remained no room for private houses.

3. Jerusalem was a Holy City and the centre of the whole nation, both in religious and secular matters, and needed, therefore, buildings for all the various purposes, as for instance, Temple, schools, barracks, places for artists, and all kind of workmen, treasuries, town hall, courts, prisons, magazines, &c., and pilgrims' houses for the whole nation. As all these were matters of State, so there was no room for private houses. And even the dwellings of the managers of all these things were not their own property, although they may have been called by their names.

4. The Talmud brings this out in explaining passages of Scripture. For instance :—

In Tractate Baba Kama, p. 82, col. *b*, it is said that the city of Jerusalem was in ten things different from other cities of the Holy Land. One of the ten is that no house could become the property of the heirs, or be inherited. In all other cities they could sell a house, and as it had nothing to do with the land or harvest, even at the Jubilee it remained with the purchaser and did not go back to the original proprietor—but not so in Jerusalem ; hence there was no private property, but it belonged to the 12 tribes of Israel. The ground, the streets, the houses, the Temple, the city walls, everything was the property of the whole nation.

In Tractate Errikin, 32 *b*, the same is said ; also in Tractate Megilla, 10 *a*, it is repeated. Further, in Tractate Aboth Rabbi Nathan, 35, Rabbi Nathan says that the law that the father and mother may bring their stubborn and rebellious son to the elders of his city and unto the gate of his place (Deut. xxi, 18–21) to be punished and killed, could not be done in Jerusalem, as the Scripture says : to bring him

to the elders of his city and the court of his place. Now Jerusalem was not his, or anyone's, city or place, but of the whole nation.

Again, in Deut. xiii, 12-16, it said: "If thou shalt hear say in one of thy cities, which the Lord thy God hath given thee to dwell there, saying, Certain men, children of Belial have withdrawn the inhabitants of their city, saying, Let us go and serve other gods then shalt thou enquire and if the thing is certain that such abomination is wrought amongst you, thou shalt surely smite the inhabitants of that city with the sword, and destroy it utterly, and all that is therein and all the spoil and the city itself burn with fire and it shall be a heap for ever; it shall not be built again." The city of Jerusalem was exempted from this law, as it was not their own city, but the city of the nation; this could be right if there were no private houses; if there had been private houses, why should they then be exempted from such a law. And yet Jerusalem was the city which stoned and killed the prophets (Matthew xxiii, 37).

Several other things could be mentioned proving that Jerusalem was in every respect an exceptional city, the property of the nation, and no particle of it private property; but I think I have quoted enough.

II.—ST. MARTIN'S CHURCH AT JERUSALEM.

Many of the buildings and churches which existed in the crusading time at Jerusalem are known, either still in a fair state of preservation, or lying more or less in ruins, but a number of them are hitherto not found or recognised. Dr. Tobler, in his "Topography of Jerusalem," I, p. 422, enumerated the following, mentioned in old reports, but whose sites were not yet discovered:—

"House of Zebedaus," Church of John the Damascene; Agidius Church; the St. Martin's Church; the Church of Resting; Chariton's Church; Julian's Church; Cosmos, Elias, and St. Thomas Church; St. Paul's; House of Joseph, &c. And the Comte de Vogue, in his book, "*Les Eglises de la Terre Sainte*," Paris, 1860, p. 304, says, that of some churches he can say nothing as to their site, amongst which is mentioned the "St. Martin's Church," which most probably has now been found.

Dr. Tobler, in his "Topography," says, A.D. 1853. "In the time of the crusading kingdom, the Church of St. Martin was situated most probably in the modern Jewish quarter east of the street, somewhere near the Mosque Omari. The church was surrounded by houses, and in front was a bakehouse." In his "*Dritte Wanderung nach Palestina*," Gotha, 1859, on p. 299, he says: "In the Mosque el-Omari, it is said by Barclay, p. 453, that traces of a Christian Church are existing—and, indeed, at the time of the Latin kingdom there was the Ecclesia St. Martini. Hence I have written to Mr. C. Schick, begging him to go there and inspect the mosque, he has done so, and answered: 'that

he had not seen in the mosque anything indicating a former church—only an arch seems to be older than the rest.’”

When about 1862, I am not sure of the exact year, the large synagogue (57 on the Ordnance Survey plan) of the Ashkenazim, north of el-Omari, was built, no traces of any church were found, as I expected according to a report in Schwarz's "Das heilige Land," Frankfort-am-Main, 1852, p. 234, *et seq.*, where he speaks of a place, "El-Maraga," having been a synagogue in former times, and taken away by the Moslems, but finally



FIG. 1.—INTERIOR OF SUPPOSED CHURCH OF ST. MARTIN.

given back to the Jews in a ruinous state, which, as I know, was generally called "Koorby," *i.e.*, the Ruin. So the matter stood till recently, when one day the Rev. J. E. Hanauer went into one of the Jewish houses there and saw some pillars, which seemed to him to have belonged to a church. When told of this, I went there and examined it, and took measurements, on which I constructed the enclosed plan. Mr. Hanauer tells me now that he has already reported this to the Palestine Exploration Fund, and that photographs were made, of which he gave four to be enclosed with my report.

It is without doubt either a portion, or perhaps even the whole Church of St. Martin, as I should think. There are four pillars of hard stone, about 21 inches in diameter, still *in situ*, their height is now only 4 feet, but it was apparently more, as the flooring is now, by the accumulation of earth and rubbish, higher than the real flooring, which I suppose is $1\frac{1}{2}$ feet or 2 feet under the present floor. No basement is visible. The capitals are plain and not alike. In the adjoining drawing I give three of them, and the fourth can be seen in the photograph. The eastern pillar, or the fifth, if there was one, is no more there. But a kind of a pillar shaft not fully round stands on the southern wall, and is higher than the others, so it is a question whether it is still *in situ* or not. If *in situ* we have before us the whole church, as a glance at the plan will convince. The width of the building corresponded to the distance of the two centre pillars from each other, and formed a square on which there might have been a cross-arch vaulting, or rather, as I think, a dome. Rabbi Schwarz's report speaks of a "fine cupola." There is still one there, but a very plain one, and a restoration of the broken roof, as the section will show. If my supposition is wrong, and the present remains are only a part of the former church, it was then as I have pointed out in dotted lines, and very likely had three aisles ending in apses.¹ The idea that this was so is to some degree supported by the present minaret, standing on the south-western corner of this larger church, the old masonry of it used as the foundation for the minaret (*see* Photograph, Fig. 1). But then the drum of the cupola had a diameter of 24 feet, like those of St. Anne, St. John, Mar-Saba, St. Croix, &c., but all of these rest on much stronger supports than such pillars, except Mar Elias, which has exactly the width of this church if it had three aisles. It is remarkable that the walls of St. Martin are very poorly built, almost without hewn stones, only rubble.

A further curiosity is, that the walls have no windows, or signs of such, so the building must have got its light from the dome, or by holes in the roofing. There are two holes now in the roof near the northern wall. When the church was complete it was surrounded by houses, as it is still, but between them is also a moderate court, as shown in the plan. The mosque is small and plain, and behind, on the east, is a house inhabited by Jews; very likely the mosque had once an entrance from the court, but I could not ascertain whether this were the case. The entrance is now from the west by a short lane, forming a little court in front of the mosque. A similar entrance leads to the church, which seems still to be called "El Maraga," of which Dr. Schwarz speaks in his book, and which I had considered to be the place of the now large synagogue. At the entrance to the little church are, in one line with another in the

¹ It is hoped that excavations and a more thorough examination of these old buildings may be made at an early date, and the publication of Herr von Schick's plan is postponed until further information is received. Professor T. Hayter Lewis, who has kindly examined the plan, remarks that the suggested dome could not have been supported on the two single pillars.—[ED.]

church itself, two mouths of cisterns—indicating that even in ancient time the entrance was from here, but by a wider road.

There is standing on the floor of the church a round stone basin, of which I give a drawing, plan and section ; probably it once formed the font. I found also a short pillar shaft, which might have been its support. The basin is very smooth inside, as it was used for a time to grind things in. I could not see any marks, or cross, or inscription, which, for a font, is rather strange, and makes it doubtful. The place is now used by Jews as a granary.

III.—TABITHA GROUND AT JAFFA.

In the year 1874, M. Clermont-Ganneau examined and briefly described this place (*see* "Memoir of the Survey of Palestine," vol. ii, p. 276.) It is a sort of district in the garden east of the city, about 5,200 feet from the Gate of Jaffa, and is called Ard Tabitha. It is high ground, and close to it is an Egyptian village called Saknet Abu Kebir, as there is east of it a Sheikh's tomb so-called. The village grows every year by new hovels, or houses, if they may be called so, being erected, the stones for the new buildings are quarried on the spot, and in so doing ancient Jewish rock-cut tombs are destroyed, as the place (although now gardens) was once a large burial ground. The Russian Archimandrite many years ago bought a piece, and since another piece, and wishes to get the whole, but on account of the Sheikh it cannot be done. However he has a large and just the highest piece, which is now called "Bayâret El Markob." He has there a fine house, and has recently built a church on the highest point. I heard that they had found some antiquities there, and so last February I went down to Jaffa with his recommendation to the gardener and housekeeper, and will now report what I found.

1. *Altar Stone*.—On the first day was shown to me a stone which they call "Altar stone," about 3 feet long and broad, and 7 inches thick. On the top it is hollowed out to some depth, and very smooth, with a few grooves round about it, so that it looks like a kind of ornamented frame, as shown in Fig. No. 2. It is apparently an imitation of the skin of an animal spread out for drying. On one of the sides of the stone is a long inscription in very small letters. I was told that many gentlemen have made squeezes of it, so that I had no need to make either squeeze or copy. I was also told that scholars are of very different opinions as to its reading. Baron Ustinoff, who was with me, said he thinks it is simply the names of those who had offered on this stone, and that all endeavours to bring out a meaning will be useless.

2. *The New Church*.—I was informed that this was built exactly like one existing in Greece, but they could not tell me the name of the place. I forward plan and elevations, and I have only to add that between the many piers and the walls round about are cross vaultings at the half height, forming, except in the choir, two stories, whereas the central

square part under the dome goes up without break to the top, from where angels and saints look down. The chief entrance is from the west, and that part forms the belfry. As this church is situated so high, and is itself also high, it is visible from a great distance. From the top of it I enjoyed a grand view all round, which I need not describe.

SUPPOSED ANCIENT ALTAR STONE

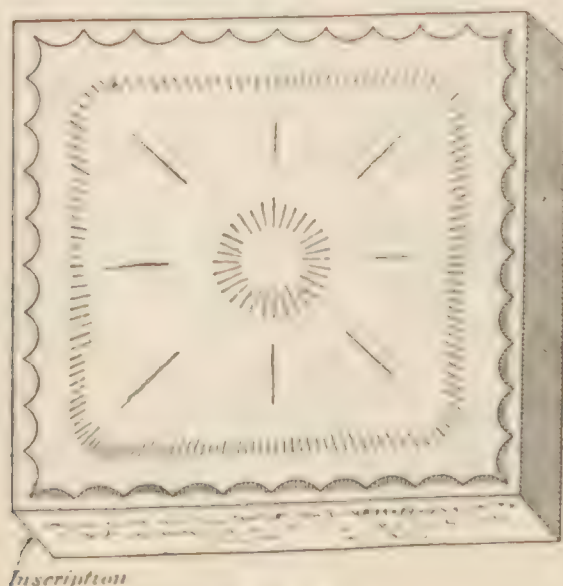


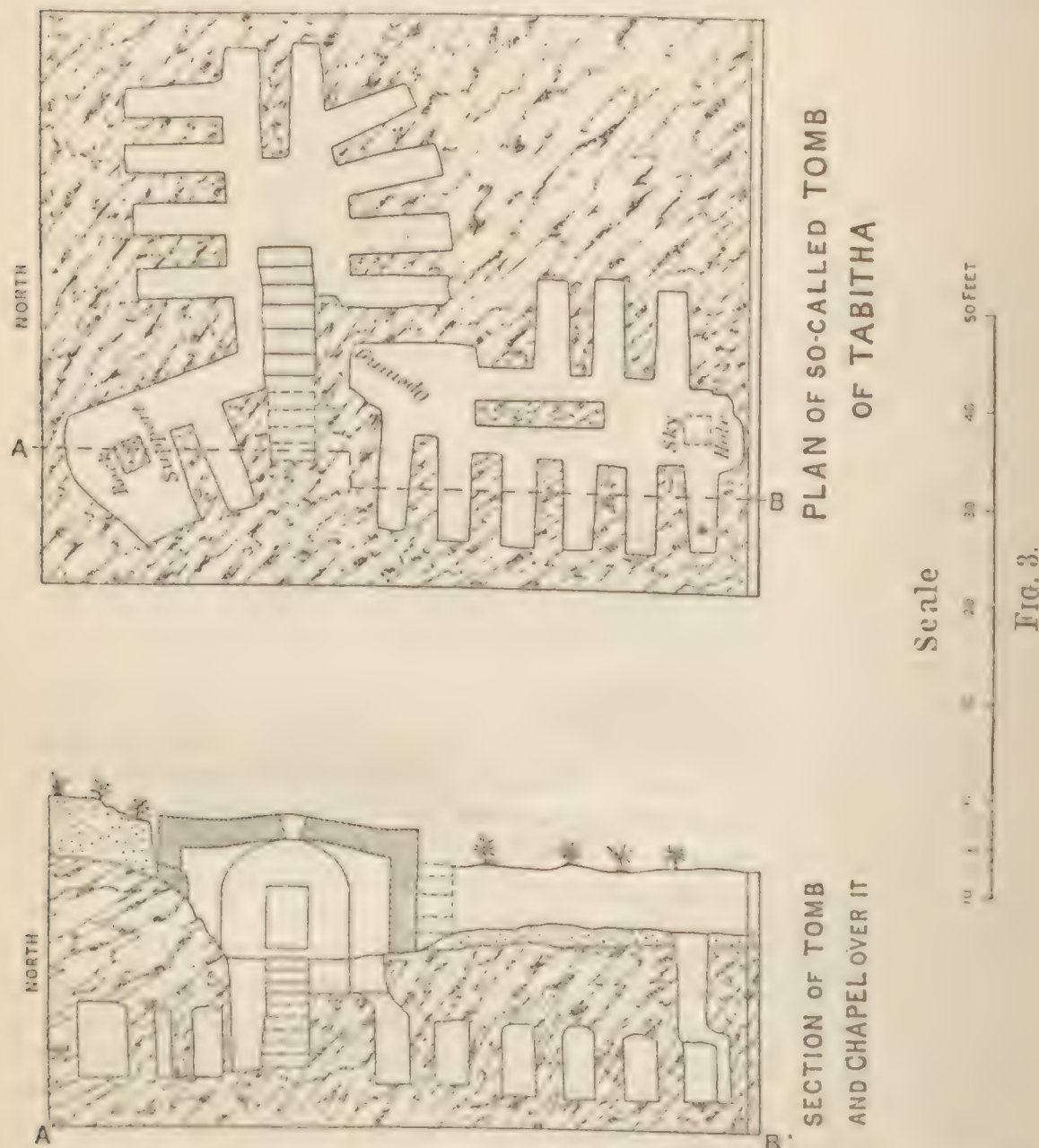
FIG. 2.

3. *The Rock-cut Tombs.*—Wherever they dig they find rock-cut tombs. The rock is not hard, but rather brittle, so the tombs do not look so nice as those in the harder rock at Jerusalem, and also in style they differ in some degree. The Russian Archimandrite has cleared out several. The most important one he has converted into a kind of chapel, which people now call the tomb of Tabitha. On coming to the spot one sees a small modern building, not very high, partly sunk in the ground, with a door on the west side provided with a lock. On entering there is first a moderate sized cruciform chamber, covered with cross archings with a hole for light in the centre. On the right and left is a narrow pavement of marble, and in the middle a flight of steps leading down to the tombs. On the east is a similar pavement with a small altar, over which is a window in the eastern wall. Going down the steps one comes to a small chamber, partly roofed with the eastern flooring on which the altar stands. Round this room the *kokin* go into the rock (*see* plan and section). They are in general about 8 feet deep, $2\frac{1}{2}$ feet wide, and 3 to 5 feet high at the entrance, but further in they become lower and more and more narrow. They were closed with masonry, and this is the reason that they are so unusually deep and high.

On the Northern side of the stair a narrow passage leads to another collective tomb, a chamber with a rock support in the middle. On the

flooring on the South side, half way up the steps, is a large opening, which is the entrance to other tombs, the chamber of which has a sky hole in the rock-roofing.

In these and other tombs and in the ground were found several antiquities which were shown to me.



4. *Inscriptions.*—In the rock-cut tombs mentioned, especially in those which were cleared out recently, were found large and small epitaph stones with short inscriptions. I made squeezes from a good many which seemed to me the most interesting; but when I got home, and was studying the subject, I found that some of my squeezes were those which Dr. Euting, of Strassburg, has already published some years ago in "Sitzungs Berichte der Akademie der Wissenschaften zu Berlin," 1885, xxxv.

Those which are not yet published are—

Fig. 4. With 5 lines.

ΘΗΚΗΖ
 ΟΥΥΙΟΥΚ
 ΠΤΕΛΕΙ
 ΣΕΝΤΟΛΙ
 ΛΦΙΣΑ'

FIG. 4.

Fig. 5. On a very rough and large stone, it seemed to me it had a preceding inscription when this was made, which had not all been chiselled away before, so some of the letters are partly still visible.

X V γΔ'

ΝΙΣΙΔΟΤΙΥΑΗΣΤΙC
 ΝΟΣΙ ΧΡΗΣΤΙΗ
 ΧΑΙΡΕΝ " v iv

FIG. 5.

Fig. 6. As the stone is broken the last letter seems to be not complete, and perhaps others are missing.

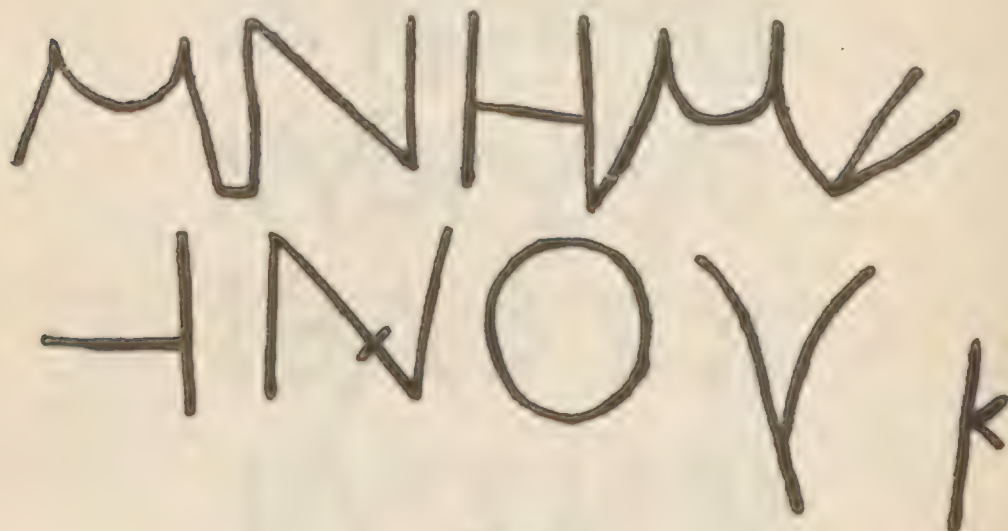


FIG. 6.

Fig. 7. Appeared to me the most interesting, having on it the seven-branched candlestick.

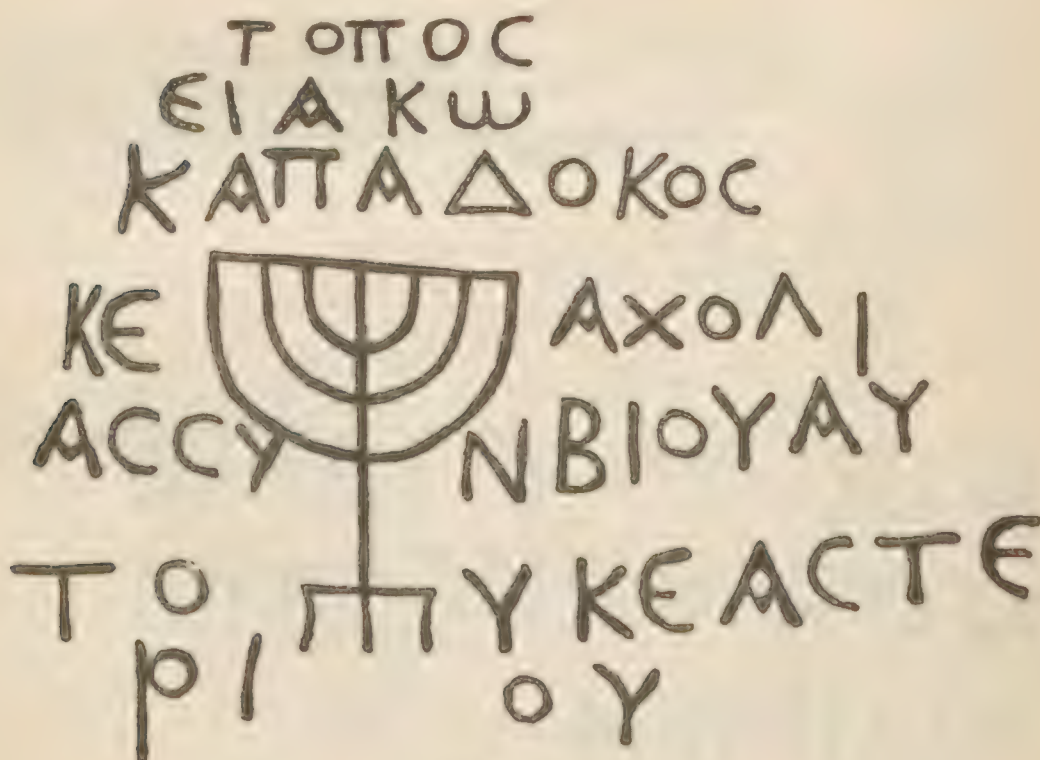


FIG. 7.

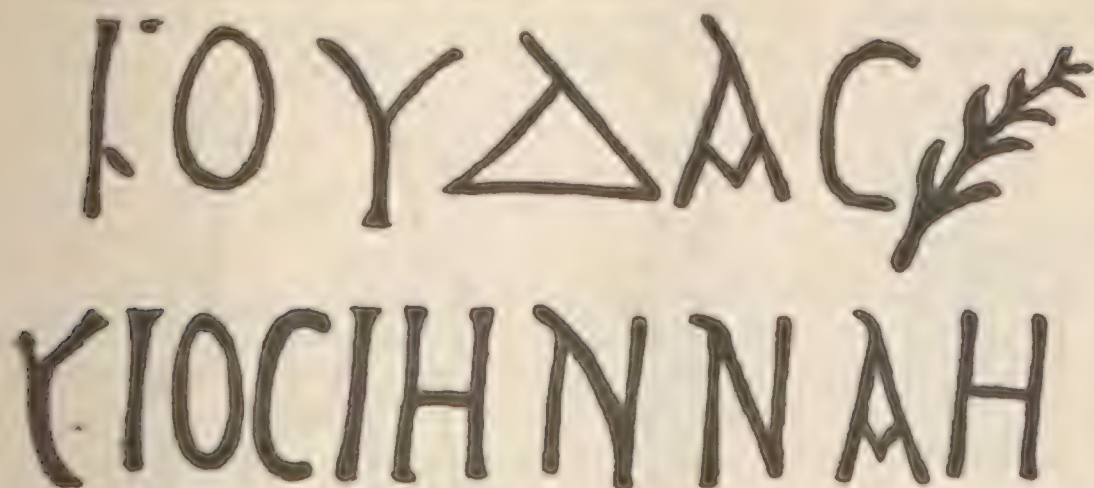
Fig. 8. I have nothing to say to this one.¹

FIG. 8.

5. *Glass Articles* were found in these rock-cut tombs, or catacombs. (1) A little bottle. (2) A kind of needle or ornament of white glass with a green spiral wound round it. (3) Green glass, a double lachrymal bottle, with a holder to hang it up on a nail in the wall. (4) The same, but larger and more richly ornamented.² (See next page, fig. 11.)

6. *Various Articles*.—(5) A head of a man in hard white stone. (6) Head of a horned animal of earthenware. It was once the upper or side part of a vessel, for it is the spout or nozzle put in the mouth when one was drinking from the vessel, similar to the native "Ibriks" of the present day (fig. 9).

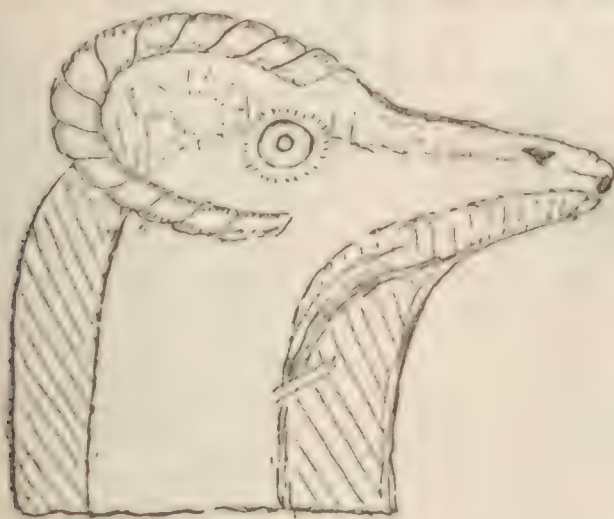


FIG. 9.



FIG. 10.

¹ See Note on these inscriptions by Dr. A. S. Murray, of the British Museum, at p. 300.

² Mr. Franks, of the British Museum, who has kindly examined the drawings, states that the articles are of the Græco-Roman period, and that Nos. 3 and 4 (fig. 11) are Stibium vases (used for holding *kohl*, with which the eyelids are painted).—[Ed.]

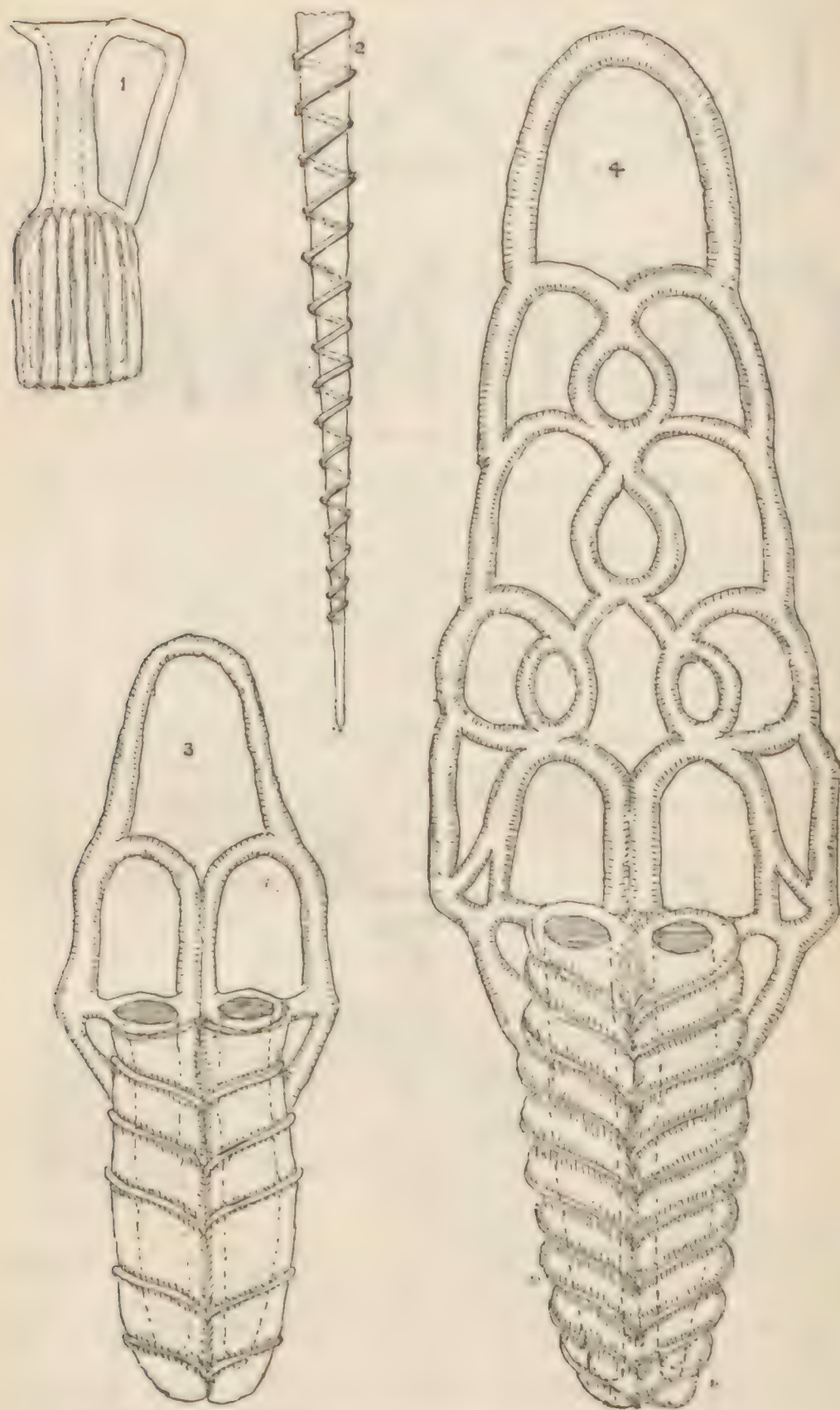


FIG. 11.—STIBIUM VASES FROM TOMBS AT "TABITHA," JAFFA.

A spoon of brass (or is it some other metal, once gilded? it looks yellow, so I took it for brass). Was it once used at the Communion? Even to-day the Greeks use such little spoons, holding only a little wine (fig. 10).

July 24th, 1893.

1. After several endeavours I am at last enabled to send you a copy of the inscriptions on the Jaffa offering stone you have asked for. As endeavours to make copies from the stone itself had no success, the Russian Archimandrite (to whom I paid a visit) was so kind as to give me a squeeze made (as I understood) by himself. I send it to you by this post in a small parcel. I have made a copy of it, which I enclose herewith, so that if the squeeze should be lost the copy may be preserved.

With regard to photographs, to send a photographer expressly there seemed to me too expensive, and I hoped to get them by chance, but have hitherto failed. The Archimandrite, whom I asked for permission to make such photographs, promised to have the small articles brought up to Jerusalem and photographed, and to give me copies.

2. Hitherto I have not been able to excavate at Martin's Church in the Jewish quarter, as the proprietor asked too much money for permission.

3. The Greek Convent (the Archimandrite Ephthymius) is building shops and lodgings as a continuation of the "New Grand Hotel," between the latter and the western city wall. About twenty new piers are already erected, all not founded on the rock, but on earth (like the western city wall) at a depth of from 12 to 15 feet. A large cistern will also be made in a similar way, not going down to the rock. So we see that in this quarter the rock lies very deep. It is also remarkable that on no part was old masonry met with, so it is clear that the ground here was never occupied by houses, though there may have been sheds or similar things. Small water-channels or little pools are met with, but all in the earth or rubbish, near the surface of the ground, and of no special interest. In order to show the exact place I enclose a small plan, copied from Sir C. Wilson's map, scale $\frac{1}{2500}$.

4. At present there is much illness in Jaffa; people speak of 9,000 sufferers. Many come up to Jerusalem for change of air. Here it is as usual, with no special illness, although great heat has prevailed the last fortnight. Beyond the Jordan the Bedouin tribes are quarrelling, and the Government have had to interfere. The effect has been that robberies occur even on this side of the river, and the marvel is that only natives are attacked; no Europeans hitherto.

IV.—BARON USTINOFF'S COLLECTION OF ANTIQUITIES AT JAFFA.

When I was at Jaffa I made a visit to Baron Ustinoff, and he was kind enough to show me his collections of living parrots, of which I counted twenty different kinds, brought from various countries, and much differing in size; also various kinds of fowls, and some flamingoes and pelicans. But the antiquities arrested my attention more than all of these. He has many interesting things, and many inscriptions; but he told me that most of them had been copied, and some published in the French paper "*Revue Biblique*," published by the Superieur of the Dominican Brethren here (Paris; London, Burns and Oates, 28, Orchard Street), so it would have been useless to copy them again. But there are still articles not yet published, and so I measured and copied some, of which I will now report, and speak first of the many Sarcophagi which he has placed in his garden at convenient points, with many pillars, capitals, &c.

1. A large and heavy one, outside 7 feet $7\frac{1}{2}$ inches long, 3 feet wide, and 3 feet 3 inches high, the legs included. The sides are $5\frac{1}{4}$ inches thick, so that it is inside 6 feet 10 inches long and nearly 2 feet 2 inches wide, and 2 feet 6 inches deep. Its lid is complete, and its form is shown by the annexed side-view and the section. Its upper surface represents a kind of cross with a high ridge across, from which it shelves down towards the sides, having at the four corners upright ears.

This sarcophagus was found several years ago at the small hamlet Danial, near Ramleh. It has no inscription, and no one can say to whom it belonged, nor exactly state its age.

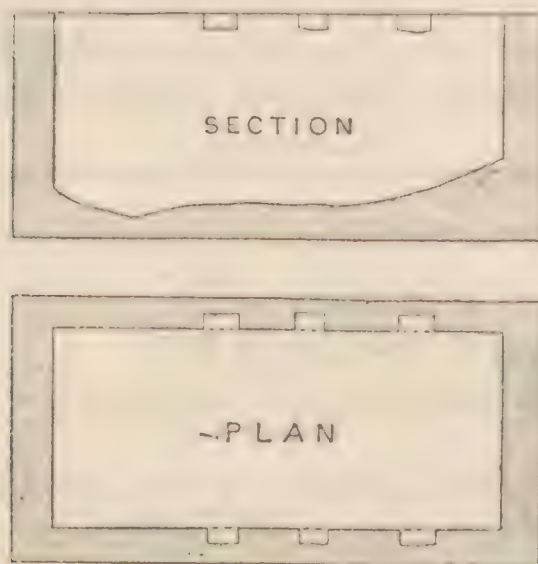
2. Is much smaller and less massive, but has no lid. It is worked very nicely, and has on the side three fine different ornaments, which inequality looks rather strange. It was found in the neighbourhood of Jaffa.

3. Lately found at "Kefr Jinnis," a ruined place between Lydda and Yehodyeh. It is rather short—inside only 5 feet long by 2 feet 3 inches wide, and, as may be seen by the section, the bottom not horizontal but declining, which indicates that the body was put in a half-sitting position. On the inner brim, on each side, are three cuttings, one opposite the other, into which apparently pieces of wood were put across. There was no lid or cover with it. On the outside, on one of the long sides, are two (or three?) crosses and a short inscription, very likely only two words. The Baron thinks it was the coffin for a Christian Bishop, as bishops are often buried in a sitting or half-sitting posture. The workmanship is somewhat rough, and the whole rather massive. The measurements are shown on the drawings.

4. Was once a very fine sarcophagus of the usual size and not massive-looking. It is strange that there is no ornamentation on the sides, which are simply smoothed, whereas the flat lid is very much ornamented. In one of the squares, which are framed with mouldings copied from wooden

panellings, is a four-leaved rosette, in the other an animal (a gazelle or roe?).

SARCOPHAGUS WITH
SLOPING BOTTOM FOUND AT
KEFR JINNIS



✠BIK + PAV ✠

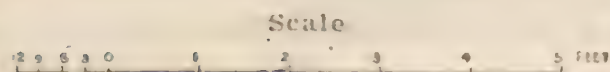


FIG. 12.

In the middle of the lid must have been a large square, and in it very likely a cross or an animal, and then again a five-sided panel like the one which is preserved, and at the end again two squares similar to those preserved.

5. Is a slab with a Latin inscription. The Baron got it recently from Askalon, and translated it to me: "Magister Philippus of" (or member

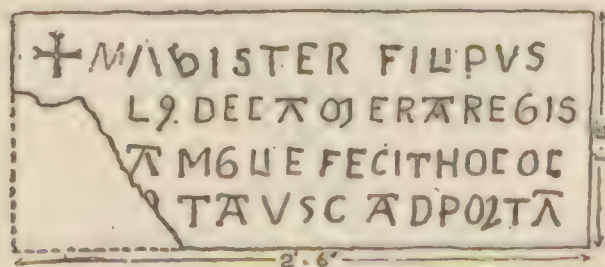


FIG. 13.

of) "the Chamber of the King of England—he built" (or made) "from gate to gate." The student of history may easily assign this stone to its

proper date. This stone proves that the King of England did some work on the fortification of Askelon. I will humbly add that the tombstone in front of the Church of the Holy Sepulchre here, on which I reported in the *Quarterly Statement*, 1887, p. 76, belongs also to some English knight of that time also named Philip. Might perhaps he be the same of which this Askelon tablet speaks?

6. Was brought to the Baron from the land of the Philistines. It is a block of reddish-looking hard stone, on which is carved the figure of a human female with two wings in a recumbent position. The hands

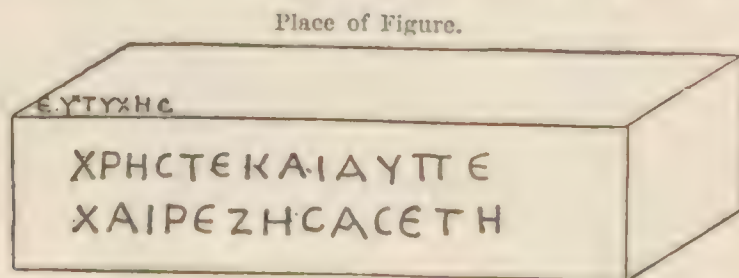


FIG. 14.

and feet, instead of ending in fingers and toes, end with fish tails. Close to the feet, on the top side, stands ΕΥΤΥΧΗC, and on the front side is a longer Greek inscription.³

7. Is a stone disc found also in the maritime plain, with the sun emblem on both sides. According to the Baron's explanation, it was used at the worship of the sun god or "Baal." It is of hard stone, but smoothed a good deal by having been much used.

8. The Baron has about half-a-dozen creatures made from white-looking metal, not silver, but harder than pewter or zinc. They were



FIG. 15.

found by the peasants in the land of the Philistines, and represent mice. When I saw them, at once I Samuel vi, 4, 5, came into my mind. These

³ See Note on these inscriptions by M. Clermont-Ganneau at p. 306. A photograph of this interesting object is expected to be received shortly, and therefore the inscription only is here given.

figures are not solid, but half relief, and pressed out from a flat piece of metal. They are without a tail, but have a hole into which a string could be fixed by which to hang up the figure as an amulet. The five golden mice which the Philistines put as an atonement with the Ark of the Covenant when sending it back, as related in 1 Samuel vi, 4-11, were perhaps such amulets.

9. An earthenware jar, only interesting for its ornaments.

10. A very curious figure, a kind of serpent with a dragon's head, with two long ears, and in its sharp, beak-shaped mouth a falling ball, very

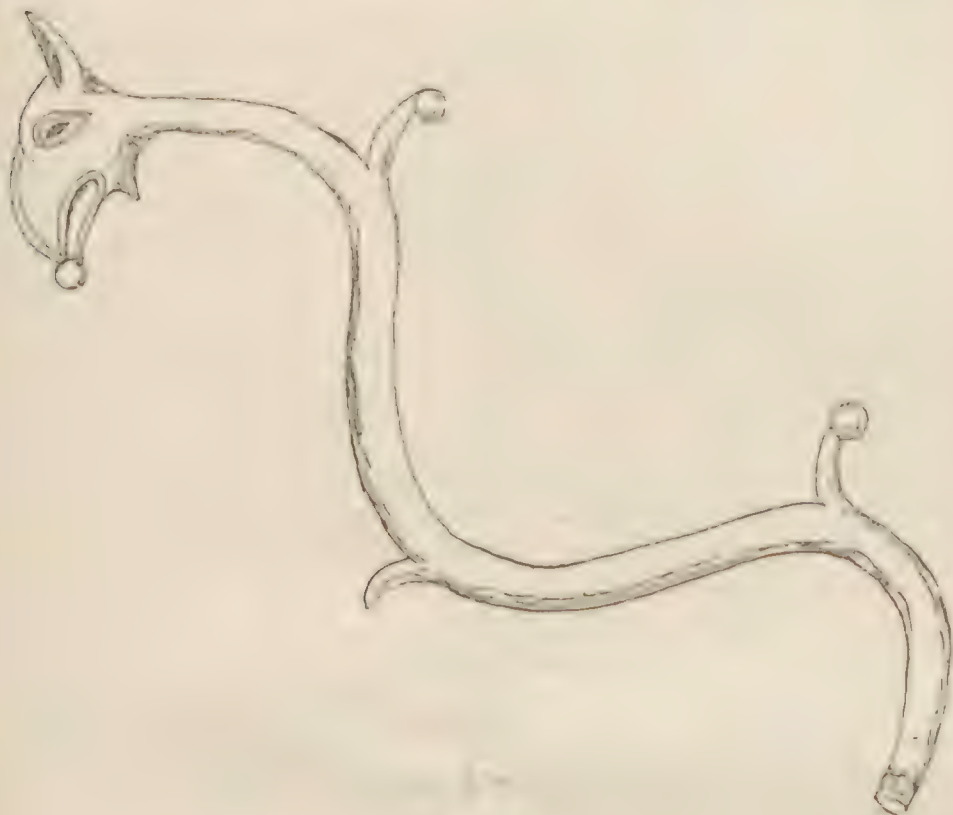


FIG. 16.

likely signifying a drop of poison. The figure is made of copper, and hollow inside. It is cast, not beaten work. The Baron has half-a-dozen, all of the same shape, but varying a little in size, so they were not cast in one form or model. This gives the idea that the ancient people must have had plenty of them, and used them perhaps as talismans. Baron Ustinoff thinks they are imitations of the serpent which Moses made in the wilderness (Numbers xxi, 9), and King Hezekiah destroyed. Whether the Baron's suggestion may be correct or not, the figures are certainly remarkable, and had some deep meaning.

V.—EXCAVATIONS ON THE ROCKY KNOLL NORTH OF JERUSALEM.

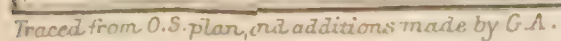
Outside the city of Jerusalem, on the north, are two remarkable rocky hills. The larger one is the so-called "Skull hill," recently so often spoken about as the probable Calvary; the other is west of it, and about 600 feet distant, a much smaller hill and comparatively of little height.¹ Its centre is 850 feet distant from the Damascus gate, in a north-western direction. This hill is represented in plan on p. 382 of the Jerusalem volume of the "Survey of Western Palestine," London, 1884, and on p. 381 it is said, "The site in question is an irregular rocky plateau rising about 5 feet above the surrounding surface, and apparently scarped on all sides. The scarp is indeed plainly traceable, and evidently artificial, except towards the south-east. The area is about 60 yards either way. The top of the plateau is sown with corn, and has a few olive trees. At the south-west corner a part of the rock rises in a kind of natural wall about 5 feet² higher than the rest. A modern cottage is built against this scarp, on the east face of it, with a paved court in front. To the south of the cottage is a small cistern, and a cave in the south scarp now closed." To this description I have to add: This last-mentioned south scarp is at least 20 feet high, and formed a pit of an irregular form, but was simply a quarry, not a pool. In the western higher part of the rock is a considerable cave, and against that the wall of the cottage was built, and so an excellent stable procured. In this cave there were traces of former rock-cut tombs. One had an entrance from the west, and even two preserved loculi, since destroyed and walled up. The cottage stands on the rock knoll itself. When the proprietor built it and was digging for a foundation for the wall with which he intended to close up the cave, he found some fine hewn stones and architectural remains, which I have described and illustrated with drawings, which were published in the *Zeitschrift* of the German Palestine Society, 1879, p. 102. The man detected further a kind of wall in a curved line, built of small square stones laid diagonally, a manner strange to me, and the only one of the kind I know at Jerusalem. ("Survey of Western Palestine," Jerusalem Volume, p. 382.) I thought further excavations should be made, but it was not done. In the meantime, Major Conder described a rock-cut tomb on the south-eastern brow of the plateau as likely to be the "Holy Sepulchre" (*see* Jerusalem Volume, p. 432). So the Roman Catholics bought the place—not the platform, but the lower ground—and so far up the brow that the opening to the said tomb came into their possession. The plateau itself remained the property of the former Moslem owner. The latter died, and his son was the heir. An impulse took place

¹ This is the knoll where Mr. Schick "first put Calvary," *Quarterly Statement*, 1893, p. 125, and which was suggested by Dr. Chaplin as its possible site in the discussion which took place in the "Times," *Quarterly Statement*, 1893, p. 85.—[ED.]

² It should be said nearly 10 feet higher.



PALESTINE INFORMATION FUND



Scale

100 0 100 200 300 400 500 600 700 800 feet

P. S. Walter Litch

amongst the Moslems to build cottages and houses for summer residences north of the city. So about a dozen were built; and this young man also undertook to build a new and large house on the platform. When digging for foundations, they found the above-mentioned curved wall in two other places on the platform; and as I was passing one day there, the proprietor showed it to me, and said that he had now really found the continuation of the curious wall. A length of 30 feet was laid bare, but not to the bottom, which I wished to examine; so he allowed me to dig wherever I wished. I wanted two things. First, to go down to the bottom and ascertain its depth, and of what the flooring might consist—whether rock, or pavement, or mosaic. The rock I found at a depth of nearly 14 feet below the general surface, and no mosaic nor any sort of pavement, simply the rock surface. The second thing I wanted was to make a shaft in the centre of the circular space enclosed by the wall. Here I found the rock 10 feet under the surface, and as on other places the diagonally-set small stones went down only so deep, and the rest under them were rough boulders and somewhat projecting. I came to the conclusion that 10 feet below the present surface was the general level or the bottom of this sunken round court. The circular wall has only one face (towards the round court); the other side had no face, but was simply of rough boulders; and behind this very uneven face (if it may be called so) was made earth, rubbish, small stones and pebbles apparently once filled in.

I had hoped to find something in the centre—a tomb, a pillar, or at least some masonry; but nothing of the kind was there, only the rock surface. If there had once been something it had been removed. And so it is still a puzzle to me what this place might have been.

I measured the place round about and also the buildings; and submit with this paper a plan and section to illustrate what I have said.

One of my German books says that the style in which the upper part of this wall is built (*opus reticulatum*) is to be found at Hadrian's Villa at Tivoli. So that one might ask: Did perhaps Hadrian build this wall, as he was the restorer of the destroyed Jerusalem? But if so, for what was it used? Such a sunken round court, and very likely not covered, but open to the sky, as the wall is weak and could not have borne a dome or other roofing. It was not used as a reservoir for water, as there is not the least mark of any cement, and the wall was certainly made to be seen. Was it an arena or playground, and so an amphitheatre? If this were the case the seats of the spectators must have been put on the higher rock scarp. Major Conder, in the Jerusalem Volume, p. 434 (a little below the middle of the page): "The platform of rock, in which the tomb is cut, seems possibly to have been the base of a group of towers with a scarped foundation."

NOTE ON THE INSCRIPTIONS FOUND AT TABITHA,
NEAR JAFFA.

By A. S. MURRAY, Esq., LL.D.

The following are translations of the inscriptions found at Jaffa by Herr Schick (*see* p. 289, *et seq.*) :—

Fig. 4. Θήκη Ζ[ωϊλ-
ου υἱοῦ Κ[λα
πτολεμ[αι
ου ἐντολι
. . εἰς αὐ[τον

If my conjectures, so far as they go, are right, this would be "The Tomb of Zoëlos, son of Claudius Ptolemæus." In line 4 the word may be ἐντολή, "by command." I do not see how the fifth line can be made to carry out that sense.

Fig. 5. Εἰσιδότη Ἀριστίω-
νος, χρηστή,
χαῖρε

"Isidotè, daughter of Aristion, good one, farewell!" The forms of the letters suggest a pre-Christian origin for this inscription.

Fig. 6. Μνημα
Ἰνουκ
"Monument of"

Fig. 7. Τόπος Εὐακω (β) Καπ(π)άδοκος καὶ Ἀχολίας συνβίου αὐτοῦ καὶ Ἀστερίου.

"Burying place of Jacob of Cappadocia and of his wife Acholia, also of Asterios."

Fig. 8. Ἰούδας
υἱὸς Ἰηνναη
"Judas, son of"

THE SITE OF CALVARY.

By the Rev. A. A. ISAACS, M.A.

THE long residence of Mr. Schick at Jerusalem, and the varied opportunities which he has had of studying the topography of the city, give interest and importance to his comments on "the site of Calvary." It is unfortunate that the exceptional privilege he had of examining the

ground to the east of the Church of the Holy Sepulchre could not be shared by others whose archaeological knowledge would have enabled them to compare and examine the ancient remains which were discovered. Nor is it possible, without a carefully-drawn diagram, to understand the features of the locality to which Mr. Schick calls our attention, and by which he endeavours to establish the authenticity of the traditional site. But there are two broad facts which he leaves out of consideration. If the spot now occupied by the Church of the Holy Sepulchre was without the city as it existed in the time of Our Lord, the area of the city itself must have been very small, and its capacity for rearing even a moiety of the population with which it is credited, simply impracticable. Besides this, a wall so drawn as to *exclude* the traditional site of Calvary would leave the highest ground immediately outside of what was a strongly fortified town. This would be utterly out of keeping with the most rudimentary ideas of a fortified place, and place it almost at the mercy of an attacking force. Surely the tracings of ancient walls considerably beyond the limits of the present city most probably represent the limits of Jerusalem as it existed in the time of Our Lord.

I do not pretend to be an authority on the subject, but it has always appeared to me that the valley of the Son of Hinnom was the great burial-place of the Jews at that time, and there must have been the tomb of Joseph of Arimathea. From the judgment-seat of Pilate the transit would be easy to that locality through the gate leading from the south-eastern end of the valley of the Tyropæon, and there Simon the Cyrenian coming out of the country might have been met, who would bear the cross to a spot, which would answer all the conditions of the Gospel history. "The place of a skull" would hardly describe the form of the ground, but more probably the place of execution, and of the remains of the dead, which being used for these purposes was regarded as defiled by the Jewish people.

BATH, May, 1893.

THE CHURCHES OF ST. MARTIN AND ST. JOHN THE EVANGELIST.

By the Rev. J. E. HANAUER.

I.

IN the *Quarterly Statement* for April, 1893, there appeared an account of a remarkable double vault and colonnade in the Jewish quarter of Jerusalem. Mr. Schick, who has now visited and planned it, agrees with me in believing it to have formed part of the Church of St. Martin, which, after the expulsion of the Crusaders in 1187, seems to have been allowed to fall into ruin, and was then bought by the celebrated Nachmanides, and turned into a

synagogue, A.D. 1227. Writing to his son, then living in Spain, Nachmanides says: "We found a very handsome but destroyed building with marble columns and a beautiful cupola, and started a collection in order to restore this edifice as a synagogue; after which we began at once to build up the same." (Rabbi Schwarz's "Das heilige Land," Frankfort-am-Main, 1852, p. 234.) Schwarz goes on to say that this building with columns and cupola still existed in 1852, and was known as "Al Maraga," but having been forcibly taken from the Jews about the year 5356, *i.e.*, circa A.D. 1566. It was turned into a Ma'serah or place for the manufacture of *dibs* or grape molasses. The name "Maragha," or place where donkeys roll themselves, is in all probability derived from the word رول to roll, and was applied in scorn by the

Moslems, one of whose peculiarities it is to try to turn Christian proper nouns into ridicule. As they applied the term "Al Kamamah," the dung hill, to the Church "Al Kiamah," or of the Resurrection, so the name El Martinieh or Mar Martin, suggested the offensive name "Al Maragha," which the double vault already alluded to still bears. The section of it on the enclosed plan of Mr. Schick's shows that at some time or other the vaulting collapsed, and was then restored. In Mejr ed Din's "Uns el Jelil," Cairo edition, Arabic, pp. 633-643, is a long account of the circumstances connected with the break-down and the restoration. I shall tell the story briefly. It seems that up to A.H. 878, circa A.D. 1473, the only way of access "to the mosque with minaret belonging to the Moslems and abutting on to the Keniset el Yehud, or Jewish Synagogue in Harat al Yehud," was by a long narrow lane leading from the south. Owing to heavy rains, a house, belonging to the Jews, and situated due west of the mosque, fell in, and the Moslems thought that now was a good opportunity for securing a shorter road of access to the mosque from the great thoroughfare of Harat al Yehud, which passes west of it. They accordingly laid claim to the ruined house, and, it would seem, opened a new lane. These violent proceedings on the part of the Mohammedans were, as a matter of course, protested against by the Jews, who produced documentary evidence that the house that had fallen in was theirs, and was not, as had been asserted by their opponents, mosque property. The case was tried before a Medjlis, or "Tribunal," the members of which are mentioned by name, and one of whom was Mejr ed Din himself. As the court could not agree in their decision, some favouring the Jews, and others the Moslems, the latter appealed to the Sultan Al Malik Al Ashruf, Abu Nusr Kayet bai at Cairo, who sent a Commissioner to Jerusalem to investigate the affair. A fresh Medjlis was held, the result of which was the closing of the Synagogue itself. The Jews appealed to the Sultan in their turn, and, after considerable litigation, they were allowed to re-open their place of worship, the sentences of most of the Ulema at Cairo being in their favour, and their right of possession being confirmed by an official decree of the Sultan's A.H. 879 = A.D. 1474. "So the Jews took posses-

sion thereof and entered in لعنة الله عليهم the curse of Allah be upon them," says Mejir ed Din, "and this caused great vexation to the Moslems, for the Jews manifested great joy thereat, and they hanged up curtains therein and kindled lamps." They were not, however, left in undisturbed possession. Their enemies accused them to the Sultan of having heavily bribed various persons in order to obtain a favourable sentence, and so the law-suit began afresh. The narrative of Mejir ed Din gives us glimpses of stormy scenes in the court, and at last, after an apparently more than usually tempestuous sitting on Monday the 4th of Rajib, "the Sheikh Mohammad bin Afeef ed Din, and they that were with him, *went to the Synagogue and ordered its demolition.* So the Moslems hastened to demolish it, and they *broke down the upper part thereof,* and the next day they demolished the rest, and it was a notable day, and Sheikh Abu l'Azm encouraged the people to the demolition, and strengthened them in their purpose, and whenever the clouds of dust rose over the heads of the people and settled on their garments he brushed it off with a mandeel (veil or handkerchief) he had in his hand, and told them that this was of the dust of Paradise, and that in Paradise they would be rewarded for what they had done." The Sultan was of course furious to hear of the destruction of the Synagogue without his orders, and commanded the chief offenders to be arrested and conveyed to Cairo. The hero of the handkerchief episode, however, fled to Mecca and thus escaped punishment. The others were bastinadoed, one fanatic miscreant, to the disgust and vexation of the Sultan, assuming the air of a martyr and saying "Allah akbar," &c., all the time he was being punished, instead of saying "Al hagg," *i.e.*, "It is just," or "I have deserved this," as the Sultan ordered him to do. Mejir ed Din's quaint narrative then goes on to relate how the Sultan sent a Commissioner to rebuild the Synagogue, and how the latter was lampooned by the Mohammedans for executing his master's orders, &c.

II.

Mejir ed Din gives us a list of the different Moslem Colleges in Jerusalem in his day. One of these (popularly known as the house of Al Malik ad Daher), but in all probability that mentioned by him as the Tazieh College المدرسة التازية faces one as he reaches the Tarik Bab-es-Silsileh after climbing up from the Wailing Place to the great causeway from Wilson's Arch. It is figured on p. 14 of Dr. Philipp Wolff's "Jerusalem" (Leipzig, 1862). Just west of this an archway spans the Tarik Bab-es-Silsileh, and its northern side rests partly on massive fragments of columns and partly on a pier of masonry which hides the façade of a crusading building. Through a broad doorway in this pier one gains access to a large and beautifully-vaulted chamber, the roof of which is borne up by two columns *in situ*, with mediæval capitals, from the sides of which ribs run up the roof. The chamber is full of

earth and stones, and, at present, it is impossible to ascertain its complete size, as walls of rubble have been built across it. The roof evidently stretches over these walls northwards and eastwards, how far one cannot tell. The old doorway, behind the more modern one in the pier, is undoubtedly Crusaders' work, as is clear from the characteristic diagonal dressing. I think this vault was once the western end of the Church of St. Giles. As you go eastward from this place towards Bab-es-Silsileh you notice on your left hand a small street leading down steps from the causeway to "El Wad." Half-way down the steps, on your right, or on the eastern side of the small street, is the door to the house of the Yousef Effendi of Sir Charles Warren's days, and immediately opposite the entrance through a passage to a long courtyard, in a house which for many years past has been occupied by Georgian Jews, here, some years ago, Dr. Chaplin discovered some more columns, which he believes belonged to St. Giles'. With the exception of a base, not *in situ*, these have been removed. The Tazieh College lies just between this house and the pillared chamber above mentioned, in the story above which one detects a Crusader's window, with moulding like a curved row of backs of books, just like that seen over the portals to the Church of the Sepulchre. This window is half hidden behind a house built on the top of the arch spanning Tarik Bab-es-Silsileh, as above stated. I tried, but unsuccessfully, to get leave to enter and inspect the chambers in the so-called house of Melek ad Daber, which is just east of the vaulted chamber.

III.

"The position of the Church of St. John" the Evangelist, says a footnote to p. 24 of the Pilgrim Text Society's "City of Jerusalem," is not known. "The cross-roads," where the text describes it as having been situated, "seem to have been at the corner of the Via Dolorosa, south of the Armenian Catholic Monastery, No. 27 Ordnance Survey."

I would call attention to the fact that just at the point indicated, south of the road, at the place where is the Ordnance Survey Benchmark 2420-6, opposite the Austrian Hospice, there is a remarkable ruined mediæval house, two lower vaults of which are still entire, one (in Sir C. Warren's time the Palestine Exploration Fund's Store) being now occupied by stone-cutters, and having in the south-east corner of the floor a shaft leading to a vault at a lower level, perhaps a cistern, full of earth, and the other being used as a stable. These vaults, which are about 30 feet long and 15 wide, lie side by side, north and south, and form a platform on the top or roof of which are the remains of a small church, of which the chancel-arch and part of the side walls still remain. This building lies east and west. A mihrab or Moslem-prayer niche, built in diagonally under the chancel-arch between two arched recesses which look like miniature apses, but are perhaps only walled-up windows, leaves no doubt that when the Holy City fell into the hands of the Mohammedans, they turned the place into a mosque, and then, as is

their way, allowed it to fall into ruin. These remains are, as I was told on the spot, called El Jami 'el Ahmar. My thanks are due to the Rev. H. K. Harris, of Runwell Rectory, Wickford, Essex, for the enclosed photograph of this interesting ruin, which I think we may regard as that of St. John the Evangelist.

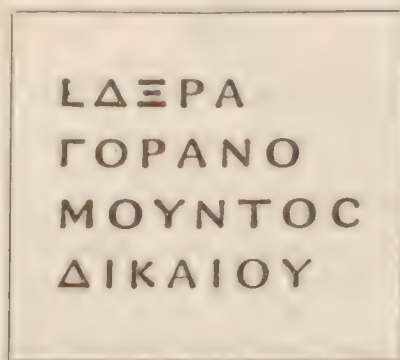
The note in the last *Quarterly* on the Crocodile from the Zerka reminds me that last winter a true leopard (not a cheetah) that had done a good deal of mischief to the flocks and cattle of Bir Zeit and the neighbouring villages north of Jerusalem, was shot by a fellah from Hizmeh. Its skin, which I saw whilst still fresh, was bought by Dr. Merrill.

Another popular version of the story told in M. P. Baldensperger's interesting paper on Fellahin Folklore is that the woman who made a wrong use of the hot loaf of bread instantly fell down on her face upon the round straw mat which covered the *batich* or circular wooden dish in which the dough is kneaded. This latter (the *batich*) was overturned upon her back, and, as a punishment for what she had done, the woman was turned into a tortoise, the *batich* becoming the carapace, and the straw mat, or "tabbak," the under shell. Her child was changed into a monkey. The bare red seats of monkeys are the hereditary effects of the hot loaf applied to the back of their ancestor. A marriage procession passing was, as M. Baldensperger relates, turned into a number of stones.

NOTE ON AN ANCIENT WEIGHT FOUND AT GAZA.

By Professor CLERMONT-GANNEAU.

ONE of my former pupils, M. l'Abbé Chabot, who has recently had occasion to visit Gaza, has just sent me copies of various antiquities he has seen there. Among them is a square leaden weight, weighing 144 grammes, with the following inscription in relief :—



My reading of it is—

(Ἔτους) δξέ', ἀγορανομουντος Δικαίου.

"Year 164, Dikaïos being agoranomos."

According to the statement made to my correspondent, the weight comes from a place near Gaza they called *Khirbet Lakijah* (*sic*).¹ If this object really does belong to that neighbourhood, it may be presumed that the date on it is calculated by the local era of Gaza, which, as appears from the inscriptions discovered by me in that town in 1870 and 1874, is reckoned from October 28, in the year 61 B.C.² Thus the year 164 of the Gaza era would answer to the year 103-104 of ours.

This weight presents affinities with one of a very similar shape formerly described by M. Waddington (*Inscriptions grecques et latines de la Syrie*, No. 1,904), and bearing the inscription, also in relief—*Κολώνιας Γάζης, ἐπὶ Ἡρώδου Διοφάντου*, “of the Colonia of Gaza, under Herodes (son of ?) Diophantos.” On the reverse is the Phœnician *mēm*, the well-known initial of the name of the god Marnas, which conclusively establishes a close connection between it and the town of Gaza. Weight, 178 grammes; leaden also.

The reverse of the newly-discovered weight bears no symbol, merely displaying a network of small lines crossing one another, so as to form lozenge-shaped compartments.

The weight bearing the name of Herodes is further marked with two letters, which are rather indistinct, unfortunately, I E, or perhaps A E. If these stand for the figures of a date they must be read $\alpha\epsilon' = 15$, or (*ἔτους*) $\epsilon' =$ “the year 5.” This date may have been calculated from the ephemeral era instituted upon the occasion of the Emperor Hadrian passing through Gaza in the latter half of the year 130 A.D. This era appears on several coins of this Emperor struck at Gaza, and is there harmonised with the ancient era of Gaza.

NOTE ON THE INSCRIPTION ON THE MONUMENT OF RED STONE WITH RECLINING FEMALE FIGURE DESCRIBED BY MR. SCHICK AT P. 296.

Below the figure :

Εὐτυχής, “Eutyches,” a well-known male proper name.

On the side :

Χρηστὴ καὶ ἀλυπε, χαῖρε. Ζήσας ἔτη

“Blessed and untroubled one, farewell! Having lived years.”

The number expressing the years, that doubtless followed the word *ἔτη*, appears never to have been cut. The funerary formula is quite common in Græco-Syrian epigraphy.

¹ Je suppose qui a doit être, en réalité, *Beit Lahyá*, un village situé au nord et tout près de Gaza.

² I do not think we may consider the era of the Seleucids, which would give us B.C. 148 as the date. That is too far back, I should say, for the palæographic character of the inscription.

RELIGION OF THE FELLAHIN OF PALESTINE.

Answers to Questions.

By PHILIP J. BALDENSBERGER, Esq.

ALTHOUGH some villages still exist in Palestine which have resisted the continual progress of Islam, the Christian villagers only differ from the Mohammedans in going to church on Sunday ; in many places, even, I would say the Christians are more degraded. To give one example, bodily cleanliness is a strict necessity to every *praying* Mohammedan, for, besides the ablutions followed by every praying man, he must be very careful not to be soiled at any time of the day by anything unclean. Thus a man, being soiled with blood, or excrement, immediately sits down and washes the spot *seven* times, every time repeating the first part of the first chapter of the Koran *الفاتحة il fatiha*, or simply the *Bism illah il rahmân il raheem*.

An anecdote concerning this ceremony of seven times washing may here be mentioned. The four leaders of the four Mohammedan sects were enjoying their supper, and *سَيِّدَنَا مَالِك* the leader of the Malki, had his silken gown soiled, he proceeded to have it washed, but was hindered by the three others ; who insisted on having it cut. After a good deal of argument, Malek cut the skirt, but thought to revenge himself, because they said "every object soiled must be cut," water is no cure. One evening he gave an invitation, and told the slave to put a jar of wine in place of the water-jar for washing the hands, and also told her that, as soon as they had finished supping, she should stumble, and in thus doing throw down the only light, and say she had no fire to light it again. Everything was prepared as ordered, and the slave fell on the light and darkened the room. Malek gave her a feigned correction, and not being able to find a light he said, "Never mind, the jar is here, pour out on our guests' hands to wash them." When all the three had thus washed in wine, he struck a light, and, finding them soiled with wine, proceeded to have their hands cut. Of course they protested, but he would not listen ; he said his silk gown was cut, and he could not see how their hands could be cleansed without cutting. After having nearly frightened their lives out of them he consented to be merciful, but then and there fixed it as an article of faith, that water takes away all uncleanness, which was accepted with joy ; thus the Malki say :—

لو لا سيدنا مالك If our Lord Malek had not been,
كان الدين هالك Religion would have been lost.

Again, a Mohammedan adult is seldom found who does not thoroughly cleanse himself after his natural wants. The act of cleansing is called ^{تجمر} Tujmur, but the Christian fellah will bathe only in absolutely necessary cases. As to morals, there is hardly any difference. Superstitions, the use of amulets, and general belief, are so much more alike because the Christian villages are smaller and surrounded by Mohammedan neighbours. Bethlehem and Ramallah are large centres where Christianity is more strongly impressed on their minds.

The first question as to religion is :—

Question 1. *Does the village profess Islam?*

Answer. Bethlehem has a powerful and warlike Moslem quarter, the Fawaghré, فواغرد, originally from Faghur, فاغور, a small ruined place up the Wady el Biar, واد البيار, by the road from Bethlehem to Hebron. Beit Jala, near Bethlehem, is entirely Christian. Ramallah, 'Ain Karim, Jifneh, Taiyibeh and Bireh, north of Jerusalem, and Beit Sahur, near Bethlehem, are villages with mostly Christians. In the plains of Sharon and Philistia all the villages are Moslem, and Christians are confined to their four towns, Jaffa, Ramleh, Lydda and Gaza. Dair Abân, دير اباان is a very large village, and its inhabitants were Greek Christians up to a very recent date. I could not fix the date of their conversion to Mohammedanism, perhaps it was about the beginning of this century. They have still identical names with the Christians of Beit Jala, the Greek New Testament of Dair Abân still exists in the Church of Beit Jala. The name Kasees has been changed into Khateeb. A man called Kasees years ago showed his ardour to Mohammedanism by going three times to the Haj, but still kept his name of Kasees, though he tried everything for solemnly receiving the name Khateeb. Fellah-Christian tradition here says that the Khateeb-Kasees (the first being the name for a Mohammedan priest, the second for the Christian priest) was asked to celebrate holy mass on the spot where he used to do it when a Christian to amuse the people and mock the mode of worship; he did so, and on elevating the chalice asked God to show mercy on him, whereupon the bystanders saw the Khateeb himself elevated several inches above the ground. On being asked whether he possessed any clue to sorcery, he confessed himself a Christian and was killed on the spot by the fanatic villagers. This happened some 60 years ago.

Question 2. *Do men and women (a) pray, (b) go on the Haj, (c) give alms, (d) fast?*

Answer. As a general rule all the Fellahin of Philistia and the mountains of Judea, amongst whom I more especially lived, pray and cease praying according to circumstances. The less they come in connection with towns and commerce the more they pray. A man in my service ceased praying at the birth of his third daughter, and

swore not to pray again till he should have a son. He kept his oath till his fifth child was born, which was a son. Again, some pray regularly the five prayers daily, whilst others pray once in a while, or others only at the feasts, when all men pray in unity. Women, as a general rule, do not pray, and care very little for religious questions, but are fanatical, nevertheless. Moreover, as a rule, those that do pray only begin when menstruation finally ceases. Girls begin to pray at the age of 12, but again cease at full puberty. I would say one per cent. pray; much depends on the locality. Two villages, Beit Dejan and Ibn Ibrâk, a little more than a mile apart and only five miles from Jaffa, are very different in morals—Beit Dejan having many loose customs, whilst Ibn Ibrâk shows great modesty. Thus Beit Dejan women wear gaudy dresses, and put scent on themselves, whilst those of Ibn Ibrâk have plain blue clothes, and are never allowed to flirt like their neighbours of Beit Dejan. (b) Those that have money, both men and women, go to the Hajj. (c) Giving alms is universal, and looked upon as a duty both by the givers and receivers. Alms are instituted by law, and no public feasts or any rejoicing is complete without almsgiving. Usually, alms are given in natural products; on the threshing floor wheat and barley, to beggars, dervishes, &c.; in the oil-mills, oil. Women always offer bread when coming from the oven. The blessing of such alms is immeasurable. They are written down as good deeds in the guardian angel's daily report. "A man had done nothing but crimes during his lifetime and had given one loaf of bread as a good deed: this was enough to save him from the stripes administered by Nakir and Nukeer." (d) Fasting is observed by both sexes during the month of Ramadan, and by as many as can easily bear it, from the age of puberty, or, if possible, before. I had a set of five fasters one day in Ramadan, but told them I had to dismiss them for the time of fasting, as they could not work and fast; they all set to work and did not fast a single day.

Question 3. *Do they believe in God, (b) scriptures, (c) angels, (d) prophets, (e) judgment, (f) destiny?*

Answer. All believe in God from Dan even unto Beersheba. There are no materialists among them known to me, although they seem to doubt about some things, incomprehensible to them.

(b) Scripture (كِتَاب) is given by God, and cannot be otherwise explained. If the Imam or Khateeb explains anything they will accept the explanation readily if they can apply it; but will not hesitate to tell him they believe him to be in error, if it does not fit their case.

(c) Angels accompany every human being, one on each shoulder, they are greeted at the end of every prayer by turning towards them, right and left; they write down every deed accomplished during the daytime, or as long as the person is awake. No sooner has sleep overtaken the person than they ascend to heaven, and lay their accounts

before God, coming back as soon as this is performed. Angels also are employed building every praying man's palace, *قصر*, thus those who make long prayers have long walls, those who make short prayers short ones, and those who do not pray have no abode at all.

There are angels of different degrees, and seven are chief angels. Sidna 'Osraïn, *سیدنا عزرائیل*, is the death angel. Sidna Român, *سیدنا رومان*, is the examining angel of the dead in the grave.

(d) All prophets and patriarchs of the Old Testament are known to them, besides many others, and they hold them in great veneration, swearing by them and fearing their punishment more than God's direct interference, though they believe it is only through God's will. Prophets have their places or abodes (*مقام*) all over the country, and are considered as the patrons of the district; they call upon them, they ask their pardon (*دستور*) and they bring offerings to them which will be described more fully under the last question.

(e) The Judgment Day is inevitable and will be held on the plateau of the mosque of Omar by Mohammed sitting on the well known pillar there. All men must meet there, "the quick and the dead."

(f) *قدر*, destiny, is written on every man's forehead, at his birth, and no accident can annul it. *كتابه وانكتبه*, a writing, it is written.

Question 4. *Do the Fellahin know the ordinary names of the planets?*

Answer. Fellahin do not as a rule know a great deal; there are only some men that know, especially in villages having intercourse with Bedawin, but as far as I could make out, Jupiter is known as Nijmet el Gharara, *نجمه الغرارد*, Venus as morning star, *نجمه الصبح*, and Mars, Nijmet el Sha'alé, *نجمه الشعالة*. Have they any curious beliefs or stories about them? More about the fixed stars. Do they believe in astrology (*علم النجوم*) and do they ever worship the planets? They do believe in astrology, *علم الفلك* ('Elm el Fallak), but astrologers are generally strangers, negroes or Algerians; they do not worship any heavenly body, but swear by them, as saying "By the life of this star and Him who created it," *وحیات هالفلك و من اخلقة*.

Question 5. *Have you ever seen the Fellahin praying with their faces to the rising or setting sun?*

Answer. No, in Palestine the Kiblê, *قبلة*, is south-south-east; they face Mecca in praying. In Egypt, especially in the south, they pray towards the east that is towards Mecca.

Question 6. *Do the Fellahin know the Pleiades or any other stars by name? Do they suppose the rain to depend on the rising of certain stars? Have they any stories about the stars, especially about a lost star, once to be seen?*

Answer. All Fellahin know the Pleiades by the name of Thureiyah, ثريا. Besides this they know many names of stars and constellations. They have many tales about them. Here are a few names, though they have a great many more:—

Banat Na'asch	بنات نعلش	The Great Bear.
Nijmetain el-Joz	نجمتين الجوز	Castor and Pollux.
Thureiyah	ثريا	Pleiades.
Hareef el Thureiyah	حريف الثريا	Auriga.
Sawak el Thureiyah	سواق الثريا	Aldebaran (in the Bull).
Il Jiddi	الجدي	Vega (in Lyra).
Nijmet el Danab	نجمت الذنب	β in the Lion (Denebola).
Ilsamak	السمك	Fomalhaut.
Ilmizâne	الميزان	Orion's belt in Orion.
Nashallat il mizâne	نشالات الميزان	Betelgeux and Rigel in Orion.
Sawak il mizâne	سواق الميزان	Sirius in the Great Dog.
S'héle	سهيل	Canopus (in Argo Navis).
Ilwadih	الوديح	
Tareek i-tubânet	تريك الضبانة	The Milky Way.

When the Pleiades rise, and wind comes on, plenty of rain is expected for a fortnight. At midnight, before the Feast of the Cross (September), when the stars suppose all the world asleep, Auriga rushes at the Pleiades and knocks the seven stars in every direction. If it does this the coming year is fruitful, but if the Pleiades are prepared for the shock, and are not dispersed, a dry winter and unfruitful year follow. Again, at the same time of year, 12 heaps of salt are placed corresponding to the 12 months of the year. Next morning the degree of wet in the heaps show the quantity of rain for the following year. The Great Comet of 1882 foretold the Egyptian War, the Crescent of the Moon one evening was just above Venus, whilst the Great Comet emerged above Lebanon. A Maronite explained this to me as being the Christian

sword coming up to destroy Turkey, the moon and star well representing the arms of the Turks.

Question 7. *Have they any images, or do they think it wicked to make such?*

Answer. The second commandment is strictly adhered to by the Moslems. It is not only wicked to make such, but to destroy any images is very praiseworthy; all artists, sculptors, taxidermists, will be put before their work at the Judgment Day, and, under dreadful tortures, God will ask them to put life into the things they have made, and on their not being able to do so they will be thrown into hell fire without mercy.

Question 8. *Are all men circumcised? At what age do they circumcise?*

Answer. All Moslems are expected to be circumcised, but there is no limit of age. As festivals always accompany circumcision, the poorer classes put it off, and should death come before it is performed, the circumcision is made on the corpse. Generally the Fellahin of Philistia perform the ceremony at the feast of Rubin, in the court of the mosque at Rubin. All friends and relations go there and assist the traditional sacrifice which accompanies it. A barber is now usually employed to operate; the foreskin is held fast with a split reed, and the operation is done very quickly.

Question 9. *Do they believe in the Mahdi? (مهدي), in el Dejjal? (الذجال), in the return of Mohammed on earth? or are they indifferent to such ideas?*

Answer. They do believe in the Mahdi, and in the Dajjan or Dejjal; they have many signs as to the coming of judgment; thus, they find in their books the end of the world foretold:—

مَتَا مَا مَدَّ الْحَدِيدُ

Matta ma mad il hadeed. When iron is laid in length.

وَقُرْبُ الْبَعِيدِ

Wa kurb el ba'eed. When distances are shortened.

انْصَرُوا إِلَى يَوْمِ الْوَعْدِ

Unzuru ila yom il wa'eed. Look to the promised day.

The iron is laid by railway and by telegraphic wires. Distances are shortened by telegraphic despatches, steamers, and railways. Again, the Jews must come to Palestine and reign in it seven days, or seven months, or seven years, but during their reign they will lay heavy taxes on everything—cats, dogs, and even stones will have to pay, so much so that everything will become so dear, famine will ensue, causing all Mohammedans to die; then will the 'Awar el Dajjan, اعور الذجان, appear and

have two streams of bread and of water flowing by his sides, promising plenty to those who believe in him. His followers will soon perceive that the streams are mere fiction, which were produced by sorcery *سحر*: the Mahdi then appears and fights with him, and finally kills him on the rubbish mounds of Lydda (*مزيللة الد*). By degrees all Mohammedans will die and no Mohammedan woman will bear children; only Christians then will be living, and when Mohammed has gathered his whole nation (*أمة*, Ummé) the whole earth will become flat, no mountains, no trees, no noise of waters, all earth will be beautiful (plain and treeless). Then Mohammed will come and call all nations to judgment at Jerusalem, everybody appearing naked, but for decency's sake the eyes will be transferred *to the crown of the head*. Heaven and earth will have passed away, *السماء والأرض زالتا*, and all will assemble in the House of Justice, *بيت الحق*, in Jerusalem, where Mohammed will sit to judge the living and the dead. The wire mentioned in the first Sura of the Koran, *الصراط المستقيم* (the immovable wire), will now be fixed from the pillar in the Haram wall to the tower on the Mount of Olives, whilst fire will be burning in the valley of Jehoshaphat. Mohammed now opens the Well of Souls, *بئر الأرواح*, and all those who had committed crimes will have expiated them in this purgatory. Then Mohammed descends into hell and looks for all Mohammedans there. Their sufferings being sufficient they call on him, *أيابنى الله أفدينا*. Oh, prophet of God, ransom us! Whereupon he takes them to the House of Happiness (*بيت السعد*), where every man lives in the palace the angels built for him whilst praying; his prayers missed on earth must be said on hell's stone, and at every prostration the skin of his forehead is burned and becomes right again. Then he enters his palace, enjoying his seven women (*حوريه*). If a man during his lifetime has sworn to divorce his wife, he has here a hourly less, and as often as he has sworn, *أعلى الطلاق* "Aleyi il talak: May I become divorced," he has fewer wives. Whilst unbelievers, not being able to pass the wire, will have fallen into everlasting fire.

Question 10. *Have you ever heard of a person being put to death at a tomb, (b) of a child being killed and burned beside a stone (نصب), (c) or of blood being smeared on a great stone as a religious act?*

Answer. (a) No; (b) No; (c) The Taamréh have stones representing their mosques, and besmear them at their feasts.

Question 11. *Are the peasants Maleki, Shafi, Hanafih, or Hanbali Moslems?*

Answer. All Philistia and Judea are mostly Shafi, yet the Egyptians and a good many settlers from the time of Ibrahim Pasha (1830-42), as at 'Akir, Zarnuga, 'Kbécé, &c., in the Plain of Philistia, are Hammah. The Turks are generally Hanbali, and the inhabitants of North Africa generally Malki. In the towns all the four sects are mixed. Intermarriages even among the Fellahin may change the sect, though as a rule the Fellah of Palestine calls himself Fellah, whilst the others are Masriin (مصريين). They do not readily intermarry. A Fellah will take an Egyptian to wife, but not, as a rule, give his daughter to an Egyptian.

Question 12. *Give any stories about 'Aly, &c., or any other of the persons commonly revered by the Fellahin?*

Answer. سيدنا آدم, Sidna Adam, asked God when he was sent out of Paradise what he should now do, so God who had distributed qualifications to all creatures told Adam he had only three left, viz., Patience, صبر, (Sabr'), Contentment, قنع, (Kan'a), and Management, تدبير (Tadbeer). But Adam wanted to ask, ستنا حوا, Sitna Hawa, Eve's, counsel. When he came back and asked for patience it was given to the dog, and to this day dogs wait patiently for their food in all towns and villages (of the Orient), and receive more stripes than anything else. Adam again came and told Eve, so she sent him for contentment, but this was given to the birds; you can still see them contenting themselves with anything they can find. So he came back, and Eve sent him to take hold of management at least; to the glory of the human race he received it, and to this day man manages to perfection everything that is given to him.

Question 13. *Are they accustomed to sing, dance, light lamps, or make sacrifice at the Kubbah or Makam?*

Answer. This has already been answered in Question 5 of Folklore, which see. But the Derwishes assemble on Thursday night (ليلة الجمعة), the night before Friday, with their instruments (عدة), consisting of small drums and cymbals and flags, and go to the Makam to perform (فقر) in honour of the Wely, or martyr. If they do not go, the Wely assembles his own people to light lamps, bring forth instruments and perform, and call upon the name of God. This can perfectly be heard, and the lights seen. The human assembly begins very slowly lighting lamps, and kindling fires to heat the drums, which give way after being beaten awhile, and then with a melancholy voice one begins: الله دايماً الله, Allah da'im Allah, God is everlasting. A second, a third, and finally all join in, then, when an emotion has come over them, they hurry the song, and change to الله حي, Allah 'hei, God is Living; here they begin to be frantic—raging; they throw

out every person unclean as the spirit inspires them (I have been present, and, for politeness sake, have not been found unclean). The shaking of the head is obligatory, and with great swiftness they finally drop the word *Allah* and continue 'Hei (alive), and by trying to repeat this as quickly and at the same time as strongly as possible, the assembly now resembles raging dogs, the 'Hei exactly imitating barking, in monosyllables, or growling. This continues until one of them falls down exhausted, dripping wet, when they gather round him and ask him to consider God as one, *وحد* Wahad. After he has called out and acknowledged God as only one, the same thing recommences, and very often four or five hours, till about midnight, the (فكر) fukur, (دق) (dāq) beating of instruments, and توحيد (tow'heed) is carried on. New candidates are often recruited on such evenings, though the final initiation takes place later on, and with more ceremonies. A diploma also is given stating which order he is to belong to. The chief orders are four, and several sub-orders depend on these.

Question 14. *Where there are no mosques, do they often go to visit the mosques in the towns?*

Answer. Yes, they generally do so on Friday, but are not very careful to do so in many places. In some small villages they go to the next village possessing a mosque, or pray at the guest house, (مدافعة), Madâfet.

Question 15. *Give the principal feasts observed, such as عيد مولد النبي, عيد الكبير, &c. At which time of the year do these festivals occur?*

Answer. 'Eed el Kebeer or 'Eed el Dehi, عيد أضحى, Feast of Atonement, and 'Eed Ramadan, عيد رمضان, the Feast of Ramadan, are the only feasts really celebrated. 'Eed Mowlad el Nabi is not universally observed, and most Fellahin know nothing about this feast. The Thursday of the Dead (Khamces el Amwât), خميس الأموات, is not considered a feast, but simply a remembrance of the dead.

'Eed Ramadan is the first day of the month next to Ramadan, Shewal, and is held for three days, the 6th to the 9th days of Zi-el-Hijje, زي الحجة, is the Feast of Atonement, or the Great Feast, held in commemoration of Abraham's sacrifice on Moriah, when he was going to sacrifice his son Ishmael (they do not believe that it was Isaac). It is kept in the month indicated by its name, whilst the Haj are bringing their sacrifices to Jebel 'Arafat, six hours from Mecca. It is 65 days' distant from the Feast of Ramadan as far as my 11 years' notices show me, 1881-91. They still await the news here generally from Damascus, so very often a day or

two are missed. Thus I have the Feasts of Ramadan and Atonement. Ramadan—August 26th, 1881; August 15th, 1882; August 4th, 1883; July 24th, 1884; July 13th, 1885; July 2nd, 1886; June 21st, 1887; June 10th, 1888; June 2nd, 1889; March 20th, 1890; March 9th, 1891. Dhié—November 2nd, 1881; October 23rd, 1882; October 10th, 1883; September 30th, 1884; September 19th, 1885; September 8th, 1886; August 28th, 1887; August 17th, 1888; August 6th, 1889; July 27th, 1890; July 16th, 1891. Both feasts have the same general features in that they kill a goat or lamb and eat it, together with rice or bread. They assemble in the mosque, and listen to a sermon preached by the Khateeb, the only time of the year they do so. All the rest of the year no sermons are held. The *Khateeb* is also the scribe, and these functions of priest and law reader, together with many other things, have evidently been handed down, and customary in the country for thousands of years. In Nehemiah viii, 1-4, it is narrated that Ezra the scribe brought forth the book of the law and from a pulpit read to the people, and in the sixth verse the form of lifting up hands, bowing the heads, and worshipping with the face to the ground, the real symbol of the Mohammedan prayer, is described. In the tenth verse Nehemiah and Ezra send the people away to eat the fat and drink the sweet and *send portions* to them for whom nothing is prepared. This portion sending is another thing which is often done here. Also they now go and fetch olive branches, if they can be procured, as in verse 11. The Feast of Atonement is evidently copied and mixed up from Judaism. It has this peculiarity that the blood of the sacrifice is sprinkled on the doorposts, and olive branches are stuck over the door as a sign of peace. The sacrifice here is not all eaten up on the spot, but parts are distributed to relatives away, as any of the female relatives married in another village. When the Khateeb has done preaching, and all the people have prayed after him, all the men embrace each other in token of friendship. Women are never admitted to prayers, but they may listen to the preaching, which relates to the lives of the patriarchs. Cats are said not to eat any meat of the '*Eed el Dehié*', but to shun it and run away. Minor feasts are the عيد الصغير, '*Eed el Sagheer*, the Small Feast, or Feast of the Lady, also Fast of the Lady, or Fast of Six, صيام الستة, Sitti being *lady* and also *six*. It is only a very few who feel inclined to hold this fast in commemoration of Mohammed's wife, as it is immediately after Ramadan. Again, on the 10th of Muharram, عشورة محرم, the 'Ashura, which is calculated to fall at the time of the return of the Haj, is kept but only by very few. Fellahin do not trouble about any but the two great feasts. Chickens are killed on the 'Ashura, for the proverb says, "Kill the chickens, and the pilgrims arrived," اذبح البجاج ولحق الحجاج.

Question 16. Do the Fellahin believe in Munkir and Nakir examining

the soul in the grave? How soon after death does this occur? What happens to the souls of the dead after they are examined?

Answer. They believe in Nakir and Nukeer (ناكير ونكير).

As soon as all people have left the burial-place, the dead man or woman awakes and sits up and says, "God! have I died?" The two, Nakir and Nukeer, are standing on both sides, armed with clubs (دبوس Dabsoos). The angel Român now begins the examination. Nothing can be denied, for should the man not reply any limb would answer. For every crime he now receives stripes by the two, for Mohammed said: "My nation must suffer in the grave." For the good the grave becomes wide, and the angel Român shows his most shining face, whilst to the wicked an ugly, hideous face is shown, and the grave becomes so narrow as to crack the bones together, and cause them to cross each other in every direction, as good deeds during lifetime are even considered objects stolen by another man from the now dead man's property. After the examination the man lies down and dies again, and the souls of Mohammedans go to the Well of Souls at Jerusalem, whilst Christians go to the Devil, and there expect the last judgment.

Question 17. *Is there any particular day on which Moslems visit the tombs?*

Answer. Thursday is the universal day for visiting tombs. Townspeople are the most assiduous to do it, Fellahin come next, and Bedawin last. As a rule, the tombs are visited the day after the burial of the dead, and for seven following days, and on the next Thursday. Food is distributed at the tomb to anybody passing, and by many this food-distributing (رحمة rahmy (mercy) is carried on till the great Thursday of the dead (خميس السموات) when everybody visits tombs and distributes food for the repose of the soul. Any food is good for those who cannot afford many and good things, but most commonly oil-pencakes (زلابيه Zalâbié, are distributed. This Thursday is always in spring, and is a movable feast-day, or *duty-day*; they do not call it feast. It is as closely as I could observe either on Maundy Thursday or next to it (Greek calendar). I could not make out why they in this follow the Greek calendar, but most probably the spring of the year is the occasion, which would not happen if they would follow the lunar months and have a fixed date. Good deeds done at the graves are especially good for the souls in purgatory. A woman in Shuweikeh had vowed if her son should recover from his sickness she would leave the world seven days. Her son really recovered, and she had to ask a learned man (عالم 'Alem) what sense to give to her vow. He told her that she must be buried seven days, so she was buried, but had food enough to support her. As soon as the ceremony of burying was over, and the people departed, a round opening was seen, by which celestial

air came in. She went in and saw men and women ill-treated as described in Dante's "Inferno." Some were hanged by their eye-lashes, some by their ears, others by their hair, receiving floggings. Passing these, she saw a woman of Shuweikeh hanged by her hair-plaits (جدائل). At once the tormented woman smelled her earthly scent, and asked if she would go back ; on her answering in the affirmative, she begged her to tell her husband, who was still living, that she had stolen money from him and hid it in such and such a place, and that he should look for the money, and forgive her, as without his forgiveness she would be tortured continually. Accordingly, when the seven days were over, the vow-woman left the grave and came back to her village. But nobody would acknowledge her, as her face was blackened by the air of purgatory. When they at length were induced to believe it was she, she told how things went on beyond the tomb, and since then it is generally known what it is to be dead and buried.

Question 18. *How is the Imâm chosen ? Is he generally a Hajji ?*

Answer. He may be Hajji and may not. The Fellahin call him *Khateeb*, ختیب, generally he is the only person in the village who can read or write. If there is none, the next village furnishes one. He usually performs all religious duties, and reads government orders, for which services he is paid a measure of wheat, barley, or other crops of the village, each in its turn, at the harvest. He is not venerated as much as the Christian priests generally are, though he has the same functions. He washes the dead, writes marriage contracts, &c. But he has no ordination, the simple fact of his knowing makes him priest. In small villages he calls out the evening hours for breaking the fast during Ramadan, whilst in large villages all the year round hours are called out. In some villages, owing to their bloody feuds, the *Khateeb* belongs to one party, and the other party bring the *Khateeb* of a neighbouring village.

Question 19. *Are there any dervishes in the village ? Do they charm snakes, tread on coals, eat scorpions, wound themselves with swords ? Are they much respected ? To what order do they belong ? Tell all you know about them. What happens when the candidate, فريدي, is admitted into the order ? Describe the Fakirs or wandering dervishes. Is it true that they have particular privileges respecting women ? Are they considered holy ?*

Answer. Every village has its dervishes, though not all have any particular sign of being such. A man may be a dervish without acting. A real dervish is expected to renounce pomp and vanity and the possession of all earthly goods, and it is only when he has entirely done so that he is entitled to beg and receive gifts. Very few charm snakes. All should tread on coals, wound themselves, &c. The degree of respect

depends on the degree to which they have advanced. There being so much to say about this, the orders and so on, a particular chapter will be devoted to the subject subsequently.

Question 20. *Do the Fellahin refuse to let Kaffirs or strangers eat and drink out of their vessels?*

Answer. They never did do so with us, and do not even own that they would if they did not respect us. Still, I believe they would do so in quite independent cases, but their greediness and eternal hope of gaining something from one's favour makes them tolerate your dipping into the same dish with them, yet to avoid being soiled or considered unclean they may draw a fictitious line between your food and theirs, asking God to consider the impossibility of doing otherwise. The Shafi' are the strictest sect, yet we never felt it, and though the Koran forbids them to let Christians eat of their meat, at the 'Eed el Dahie' they always brought it into our house, in Artâs, and we ate with them, *sans gêne*. Many a time I tried to have them say something against us, but was often told that we were no نصارى, Nazarenes or (native) Christians, but فرانجى, Franji, being cleaner than the indigenous Christians, for we wash or bathe daily, a kind of ablution; we give alms, in the way of hospitals, orphanages, &c.; and as to praying, they do not know, but God may have mercy some way or other. But fanatics do not admit so much.

Question 21. *Are the five hours of prayer observed by the Fellahin?*

Answer. It depends a good deal on the Pasha or Sheikh of the district. Thus, during the Governorship of Raouf Pasha, 1875-1889, a good deal more of religious sentiment was observed than before his time, and after that a little less. But, as near as I could observe, in the Jerusalem district, Fellahin are less prayers and fasters than in all others. Nâblus, Hebron, Gaza, and Jaffa, important centres, as a rule, observe the five hours more strictly, the *Muadîn* موادين reminding them. About the years 1870-74, in Artâs, very few really did pray; but heavier taxes, closer watching from the Government as to thefts, &c., made them change a little, though now only about a quarter of them pray. The coming generation seem to live under the influence of the 15 years of Raouf Pasha, which may, however, be lost by and by. The Khateeb of the large Philistia villages generally has a watch, and regulates his hours for calling out by it, but should he fail to have one he regulates them by signs:—

The Morning Prayer

صلات الصبح

By the first streaks of daylight.

The Midday Prayer

صلات الظهر

By facing the Kiblê, قبله, the sun strikes the right eye.

The Afternoon Prayer	صلات العصر	By measuring the shadow of one's self, which is to have 15 paces.
The Sunset Prayer	صلات المغرب	Sunset.
The Evening Prayer	صلات العشا	When the last streaks of daylight vanish.

Some have prayers between the five; as two bowings between morning and mid-day, *رفعين* (two kneelings), another two at mid-night, *سنة*, but these are not obligatory, whilst the five prayers are *فرد* (*farad*), a debt which, as mentioned, must be executed; and, if one day a man has no time, he must repeat it on the other, and every prayer at its hour, no matter how many accumulate, and, if neglected, it will be done at the gate of hell, burning the skin of the forehead every time it touches earth.

Question 22. *What is the Kod? قود, sacrifice? When and where is such a sacrifice performed, and why? Is the animal eaten entirely by those taking part? Are sacrifices made on occasions of public rejoicing?*

Answer. *The Kawad, قود, strictly taken, is no religious ceremony, though on some occasions it might turn to that. The word is derived from leading the sacrifice to its destination. Thus, it is "led" to celebrate the birth of a son, return from a far journey or a military life, after a wedding, or as a condolence after death. The sacrifice is led to the house of the person having enjoyed or lost, by some friends or relatives, mostly from one village to another. When the Kawad is perceived, the person for whom it is meant, or his relatives, receive those who bring it either at home or at the guest house, and a goat or lamb is at once killed for supper. Next morning another is killed for breakfast. All partake of the food. The animal (brought) is generally the first to be killed, and the principal leaders have garments given to them, generally of red silk. Joseph gave his brothers such (Genesis xlv, 22). Samson had to give such (Judges xiv, 12-20). An illustration also of the inevitableness of this custom we find in 2 Kings v, 20-27, where Gehazi would not be content with nothing, but went after Naaman the Syrian, and got two changes of garments. The Kawad is not absolutely necessary to be held immediately after the event for which it is meant, but may be done a year or more afterwards. It is only done in honour of a male member of the family, as a woman is considered earthly goods (مال). Though a man may be sorry for her loss, he generally must not show it, الرزق على الله. Property is God's. They may not even mourn males. But a Kawad may be brought for a deceased boy of six months, as he is a man lost to the family.*

TADUKHEPA'S DOWRY.

By MAJOR C. R. CONDER, R.E., D.C.L., &c.

This list of presents sent to Egypt with the bride of Amenophis III. is highly important as indicating the civilisation of the fifteenth century, B.C., extending to Armenia, and indicating trade with central Asia. It is contained in the tablet numbered B26 of the Tell Amarna collection, and though this tablet is much injured, and will no doubt require very special knowledge to translate fully, a good deal of its contents are easily understood. At the bottom of the left-hand column at the back (lines 44 to 50) the following passage occurs :—

“These are the (treasures?) of the female slaves, all the things that Dusratta, King of Mitani, gives to Amenophis III, King of Egypt, his brother, his relation by marriage for Tadukhepa, his daughter, to the land of Egypt, to Amenophis III for marriage, when he gives her he gives these.”

The list begins with a pair of horses, and a chariot, the whole plated with gold and set with some kind of precious stones, and with silver, with shafts and crossbars of gold, the weight of which is stated, and the details described, with the ornaments of the horses' harness. A litter for camels appears to follow, adorned in similar style; and cloths of purple and many colours, and one worked with gold, with a girdle fringed with gold, and rings of gold. Objects of bronze and of gold follow, and possibly a headdress adorned with gold, and other garments. A (crescent?) of rubies, emeralds, and other precious stones, and an arm band of gold and gems follow. The saddle for a horse is adorned with eagles of gold, and precious stones, apparently including turquoises. In the next column is enumerated a necklace of gold and gems, a bracelet of iron and gold with gems, an anklet of gold, and another ornament with 25 emeralds. Eyes of gold and rings of the same, and a collar in six rows, with other articles of gold and gems including emeralds. The dresses include one of purple, apparently of Phœnician work, and another from the city *Khat* (perhaps Hit on the Euphrates), another which was green, and a third dyed crimson. Ornaments of precious stones, including emeralds, follow, and a carved throne gilded, and veneered with wood supposed to be ebony, and a bracelet of silver, and vessels of copper with gold handles. The final objects appear to be chests to hold the presents—of stone.

On the back of the tablet some object of jade is noticed, and leaves of silver and gold, with cloths, for beds (or seats). A number of objects of bronze (or copper) are then enumerated, some of which belonged to a chariot; and on the right-hand column of the back, boxes of strong wood (ebony?) to hold the treasures, and some object adorned with gold lions, and set with emeralds, with other things of ebony, white wood,

silver, gold, and gems—Phœnician robes, and others from the city *Khat*, and bronze objects for horses.

Another long tablet (25B), giving a similar list, appears to be part of the same inventory. It is much injured on the left side, but the enumeration includes earrings with gems, and trinkets adorned with emeralds and other gems, which occupy the whole column. In the right hand column we find mention of a necklace of gold and gems, and eyes of precious stone, a bracelet of gold, an anklet of gold, and other bracelets, one of iron adorned with gold, and a clasp or brooch of gold and emeralds. After this, boxes to hold the treasures are enumerated, one being of alabaster, and another adorned with gold. Objects of silver follow to the end of the column.

At the back of the same tablet other objects of gold and silver come first, including an anklet and other adornments for the feet and body. On the right-hand columns, silver objects come first, and horns of the wild bull follow, adorned with gold, and other objects of ebony and gold. Finally, bracelets and anklets of gold are described in detail, and a "pair of earrings of gold with pendants of emerald and stars of gold," and as many as twelve bracelets and eight anklets of gold, and ten silver anklets for women, with silver adornments, and twenty earrings of gold with pendants of gems.

I am not aware that any translation of these tablets, or even an abstract of their contents, has yet been published. Those who are acquainted with the treasures found at Mycenæ and Troy, by Dr. Schliemann, in the lower parts of the ruins, which are supposed to be as old perhaps as 1500 B.C., will observe the resemblance between the art and materials of the objects which he discovered, and those which came from Armenia to Egypt. Wherever the precious metals and gems were found, jade was only to be obtained in Turkestan, and white jade only on the borders of China. This agrees with the mention of ivory among the presents sent to Amenophis III from Babylon. Dr. Schliemann found both jade and ivory in his excavations, and leaves of gold which are supposed to have adorned dresses, as well as the famous gold tiaras, and vessels of gold and of bronze. It has long been pointed out that this art was Asiatic and not European; and the double eagle, which is carved on Hittite bas-reliefs, was also an emblem found at Mycenæ, with the double axe which is distinctive of Carian coins. The art in question has been called Carian by some, and the early Carians appear to have spoken a Mongolic language. The connection with the contemporary art of a Mongol people not very far east in Armenia, casts, therefore, an important light on the character of the actually discovered treasures of Asia Minor.

NOTES ON THE JULY "QUARTERLY STATEMENT."

By MAJOR C. R. CONDER, R.E., D.C.L., &c.

THE stones figured p. 201 are like many examples described in the *Memoirs*. Dr. Thompson, in the "*Land and the Book*," described the sort of mill to which they belonged, and I think there is no doubt they belonged to an oil mill.

The article by Mr. P. J. Baldensperger is one of the best sets of answers returned as yet to the questions which I arranged for the Society. The replies of school teachers and educated natives have not been satisfactory, but the present correspondent shows that he has had the intimate acquaintance with the peasantry which is requisite. I hope he may go on with the other questions, and give us the full benefit of his experience.

The unlucky character of the fig tree was well known to me. The natives always objected to camping under figs, saying it was bad for the eyes. The account of the *Jān* contains many new details not to be found in Lane, and recalls very closely the statements of Akkadian tablets as to demons from below. The Akkadians also expelled such from the *tors* of the possessed, driving the demon gradually downwards out of the body. No doubt this was to prevent injury of the more important organs just as the demon was leaving. The Akkadian demons were also said to refuse to do any useful work, and to lurk under couches and floors. The great antiquity of these superstitions is thus illustrated. The Akkadian demons were, however, neither male nor female.

The sign which is called "Solomon's Seal" in this paper is, I believe, rightly the *Seatan David*. Solomon's Seal, which was a common mason's mark in the 12th century, had five points, not six.

The answer to Question 12 is of interest as illustrating the account in the Bible (2 Sam., xiv, 26) of Absolon's "weighing his hair" annually when he cut it. He was courting popularity by giving the weight in money to the poor—an explanation which has long been known. Lane mentions the weighing of children's hair.

The eagle owl, who is an enchanted woman, is also an interesting character. Lilith, the female demon mentioned in the Talmud and in the Assyrian magical tablets, was the enemy of new-born children, the "night female": the word is, however, also used for the screech owl in the Bible. I think *Sitt Leila*, one of the female saints of Palestine, must be a Lilith.

The superstitions about horses are numerous. I used to ride a horse which had on its forehead the sign of sudden death for the rider. I bought it cheap in consequence. It threw me badly over its head once, but this my servants naturally expected. On another occasion, an Arab sheikh with me was much frightened at my horse pawing the ground,

and kneeling down to drink. No doubt he thought it was digging a grave.

The legend of Muhammad in the cave (of Mt. Hira) covered by the spider's web, is told of David in Talmudic literature, when he fled from Saul.

Ghouls do not seem to be familiar to the writer. There are several haunts of ghouls marked on the Western Survey, and east of Jordan all the dolmens were known to Arabs as "Ghoul's houses." Another ghoul lived in the Jordan valley in 1874, and I have been in a ghoul's cave near Jericho. The word, however, appears to be Turkish rather than Arabic. It is more commonly used among Arabs than among the Fellahin.

I believe the *Marid*, or candidate for admission into a Dervish order, usually appears naked at the ceremony of initiation.

The carrying about of boats is not a ceremony which I have seen in Palestine, but I have heard of it in seaside towns, such as Tripoli, and have witnessed it at Constantinople.

My impression is that it is very difficult to get natives to talk on such subjects at all, and that information can only be got from residents who have had the special experience of Mr. Baldensperger. Those who live in towns like Beirut do not, as a rule, know anything about the peasantry.

ZION (OR ACRA), GIHON, AND MILLO.

(*All South of the Temple.*)

By the Rev. W. F. BIRCH.

PATIENT investigation has clearly shown me that Zion, *i.e.*, the stronghold of Zion, captured by Joab and afterwards named the City of David, was situated on Ophel, due west of Gihon (Virgin's Fount). Any theory at variance with this conclusion will (I am satisfied) on careful examination prove to have been founded on some mistake.

We, the defenders of the Ophel site, are, as were the Jebusites, few in number, but like the comies we make our houses in the rock (but rocks, R.V.), and so are quite able to hold our own against all comers at all times. Our opponents have indeed the Press on their side. Canon Tristram, Sir C. Warren, Major Conder, Rev. A. Henderson, Mr. G. St. Clair, and, lastly, Sir Charles Wilson in the Dictionary of the Bible, are scattering their Pseudo-Zions far and wide. In vain I urged the Bible Society not to be afraid, but boldly to put the City of David where Nehemiah places it, *i.e.*, south of the Temple (*Quarterly Statement*, 1885, p. 61), the virtual reply in "New Bible Maps" was no plan of Jerusalem, and En-rogel misplaced at Gihon. Another Society that prints for the million was equally timid. Meanwhile, my publisher

terries at Jericho. Thus error catches thousands, while truth gets hardly a bite.

I do not undertake to convince my adversaries, but merely to confute their arguments or point out their inconsistencies. Yet if I break only one link in a chain, the latter is useless until it is mended. Would Samson have done more? Let me now deal with some of the errors adverse to our Ophel site.

1. Mr. St. Clair in these pages, and in his "Buried Cities," is partly in agreement with us in placing the City of David south of the Temple, but he does not extend it so far south as Gihon. As I first learnt from him the true position of the valley gate, I broke not merely one but (by way of special kindness) three links in his chain, by asking three questions in *Quarterly Statement*, 1891, p. 255, each one fatal to his line for Nehemiah's wall. These questions, first asked in *Quarterly Statement*, 1889, p. 207, remain still unanswered. As, however, a writer informs me that Mr. St. Clair has detected flaws in my theory, and discovered arguments fatal to my views, perhaps he will excavate them out of "Buried Cities" and state them distinctly in these pages; and also, just in passing, answer the three questions. Silence I shall take as equivalent to admitting that they are unanswerable.

2. Sir Charles Wilson, on the contrary, admits our Ophel site for both Acra and the City of David. He says (*Dict. of Bible, Jerusalem*, 1634): "Although the term Acra included that portion of the (eastern) hill upon which the Macedonian fortress and the Temple stood, it was more especially applied to the quarter of the city lying between the Temple cloisters and Siloam"; and (1651), "The question whether the stronghold of Zion was to the north or to the south of the Temple, cannot be solved with our present knowledge," and again (1652), on Nehemiah iii, 16, "This passage, when taken with the context, seems in itself quite sufficient to set at rest the question of the position (on Ophel) of the City of David, of the sepulchres of the kings, and, consequently, of Zion; all which could not be mentioned after Siloah, if placed where modern tradition has located them."

I pause to express the pleasure of having an opponent who candidly owns the correctness of our site. Perhaps in these twilight days most would be content with a compromise with error, but my intolerance precludes me from admitting that in the Old Testament, 1 Maccabees and Josephus the terms "the City of David" and "Acra" are in any case applied to any part of the eastern hill at Jerusalem, except to Ophel, so called. I say *eastern*, because Josephus writes so carelessly as to describe (in the opinion of Williams) Herod's towers in the Upper City ("Wars" VI, viii, 4) as Acra; and, if this be true, I am forced to admit that he may also mean the Upper City when he speaks of David taking the Acra in "Ant." VII, iii, 1 (*Quarterly Statement*, 1885, 208; 1890, 330).

Sir Charles Wilson's inclination, or decision, to place the stronghold of Zion at Antonia, north of the Temple, does not seem to me to rest upon the mistake (see 3 below) of Canon Tristram, Major Conder, &c., that the

southern site was indefensible as being *dominated* or *commanded* by the higher ground north and west, but on misapprehensions as to the Acra of the Macedonians and Josephus, which Acra, it is obvious, was practically the site of the City of David, *i.e.*, the stronghold of Zion.

I arrived at the southern position for Zion without difficulty, as soon as ever I laid aside Josephus and took the Bible as my guide in this matter. This was a simple way it is true, but fifteen years have proved it to be a safe way.

Sir Charles still prefers to work backwards (*supra*, 165) through Josephus, *i.e.*, muddledom, but such a course compels us at each step to consider the veracity of Josephus. I am willing to take Josephus at Sir Charles Wilson's estimate. He says (Dict. B., 1632) Josephus is not yet convicted of "any material error in describing localities in *plan*," but he uses "exaggerated statements whenever he speaks of heights": his "national vanity" is "checked, when he speaks of what still existed and could never be falsified." Lastly, on p. 165 (*supra*) he says: "If we could once reconstruct Jerusalem as Josephus *saw* it." (Italics are mine.)

Armed with this gauge, let me now accompany Sir Charles in his search for Acra, and test his conclusions by the standard thus approved by him.

(A) On p. 165 he says Acra was situated "on the eastern hill, upon a rocky height that was afterwards cut down and levelled." Now did Josephus ever see that height either existing or cut down? Neither. For the date assigned to the story was 200 years before he wrote. This case then is not one of *saw* but of *height*, *i.e.*, of *certain exaggeration*. I may repeat that 1 Macc. knows nothing whatever of "a rocky height" or of "cutting down and levelling."

(B) "The Acra was in close proximity to and *overlooked* the Temple." As on Sir C. Wilson's plan the distance between his Acra and his Temple is precisely the same as between my site for Acra and his Temple, it is unnecessary here to remark on the "close proximity"; but as to the *overlooking*, I must observe again that Josephus was not there to *see*, and the question is again one of *height*, and so of *certain exaggeration*. That the mount of the Temple which was by (*παρά*) the Acra (1 Macc. xiii, 52) means necessarily that one was within bowshot of the other, I cannot for a moment admit. Part of Sicily is said by Polybius to be *παρα*, *i.e.*, alongside of Italy.

(C) He urges that Acra was "within the limits of the *City of David*," and refers to 1 Macc. i, 33, "They builded the City of David with a great and strong wall (and) mighty towers, and it became (or was turned into, *ἐγένετο αὐτοῖς εἰς ἄκραν*) an Acra for them." This so obviously means that the places were identical, that I have difficulty in seeing why this reference should have been given as showing or implying that the Acra was *within* the City of David: for if *εἰς* is to be made to imply *within*, it would be the City of David that here was *within* the Acra, which is diametrically opposed to what is urged above in support of Sir Charles Wilson's theory. Brecon, I admit, has been made into a

depôt, and the dépôt, I presume, is *within* Brecon. This is possible and true, because we speak loosely. But if we built the castle there with a great wall and mighty towers, and it was turned into a (medieval) fortress (or Acra), surely no one would urge that the fortress was within the castle. Yet this seems to me to be precisely what is done in the above statement as to Acra. If one thing is clear in 1 Macc. it is this, that the two terms "Acra" and "City of David" are identical. Indeed, Josephus recognises the identity when he paraphrases "The host that was at Jerusalem (in) the City of David" (1 Macc. ii, 31), by the words "The forces they then had in the Acra at Jerusalem" ("Ant." XII, vi, 2). If it be urged that in the Greek text (Macc.) there is something wrong, as Jerusalem was obviously not the City of David, then I must refer to 1 Macc. xiv, 36, "Those in the City of David those in Jerusalem who had made themselves an Acra." Here the persons referred to are obviously the garrison of the Acra named in Josephus. If it be urged that, though Josephus above and in XII, x, 4, uses "Acra," where 1 Macc. uses "the City of David," it does not follow that the Acra was not within that city, then I must exclaim, "Surely building the City of David means building the City of David, and not merely some part within that city (or castle)."

(D) Sir Charles Wilson further urges that no Greek engineer would have built an acropolis on lower ground than the building it was intended to command and overawe. But who says that the Acra was intended to command the Temple? If it be said Josephus, then I reply this again would be a question not of *sight* but *height*, i.e., *certain exaggeration*. In point of fact, however, there was nothing needing to be overawed. The faithful Jews fled from Jerusalem. The sanctuary was laid waste like a wilderness, and its gates burned up. The story of Josephus about those in the Acra rushing out upon the Jews going up to the Temple, relates to a time years after the Acra was built, and is the Jewish historian's paraphrase of the statement in 1 Macc. vi, 18, that the garrison of the Acra besieged those in the sanctuary (or Mount Zion).

The reader will probably by this time perceive that "Acra (at Antonia) on a rocky height, within the limits of the City of David, and overlooking and overawing the Temple" is, after all, only an imposing castle of cards, the *section* being *exaggerated* by Josephus, and the *plan* misplaced by modern writers misled by the fanciful section. Acra such and so situated is only a chimera. The City of David in the Old Testament is always consistently placed south of the Temple, and there was no call for the Jews, after the time of Nehemiah, to devise another north of it. I pass by Aristeas with one remark. If Sir C. Wilson's site for the Temple be correct, the summit of Moriah being north of it suffices for his fortress; if wrong, the tower of Hananeel would do equally well.

I must briefly notice the replies given on p. 165 to my points on p. 74.

(a) I do not see how the statement that "Acra was in the Lower City" shows that either was north of the Temple.

(c) Josephus (in his fiction) says the very mountain itself was cut

down. Surely a scarped rock does not indicate both a limit of range and also economy of labour.

(d) It is not part of my theory but of my opponents', that Acra was higher than the Temple. I ought not, however, to have questioned their knowledge of geology, but I suspect that it is also geologically impossible for the site of Acra at Antonia to have been naturally higher than Sir C. Wilson's third hill. The level at the Holy Sepulchre seems to be 2,495 feet, and that of Antonia 2,462. Will the dip from east of the Damascus gate allow the rock near to Antonia to have exceeded 2,495 feet?

(e) I accept the explanation given as possible in the first case, which is one of *height*, and therefore of *certain exaggeration*; but what of the second, where Josephus arbitrarily turns *down* into *up*?

(f) It is objected that if the Temple be the third hill there must be a valley across Ophel which does not exist. Josephus says there used to be such a valley, which was filled up (200 years before he wrote). Is not this, therefore, a case not of *sight* but *height* (or depth, practically the same thing), and, therefore, for the last time of asking, of *certain exaggeration*? As, however, the City of David must have had some fortification (Millo) on its north side on Ophel, and probably also an artificial ditch, both of which were no doubt removed before his day, there was probably some small foundation for his levelling of Acra and filling up of the valley at some unknown date.

(g) My quotation (*supra*, 75) from Josephus is said to be incorrect and incomplete. I suppose the sting is always in the tail. I deal severely but, I hope, not shabbily with Josephus. On p. 73 I had given the quotation both in full and also correctly, so far as I can see, and shall be glad to have my error (if it exists) pointed out. It seemed needless then to quote again in full on p. 75. To say the meaning attached to it is wrong does not help to settle the question any more than saying a particular site for Acra is wrong without any evidence being produced. I maintain my meaning is right.

(h) As no instance is produced of a threshing-floor being inside a city, I imagine such cannot be found. To place Araunah's, therefore, within the city seems to be an anomaly.

But I must pass on. Sir C. Wilson says (D. B., 1622), Cestius "at last encamped in the Upper City opposite the palace," but outside the first wall. I believe it is admitted that in every passage except this ("Wars" II, xix, 4) the Upper City means the south-western hill within the first wall. To put it briefly, the words of Josephus (ἐλθὼν πρὸς τὴν ἄνω πόλιν) are pressed into meaning not "having come towards (or near to) the Upper City," but having come to (Whiston says into) it, so as necessarily to occupy a part of it. The preposition *προς* is common in Josephus. Titus turned aside (*προς*) towards the tower Psephimus, yet he did not enter it then, but remained outside for days. Simon came to the wall of Jerusalem ("Wars" IV, ix, 8) and was indignant at being kept outside it. Vespasian came to (*προς*) Gamala, but did not occupy it without a siege. This is a question of *plan*, and it is not necessary in this case, even if it be possible, to force

a construction on the words of Josephus that does not well agree with what he says elsewhere about the Upper City. Ewald, it is true, or his translator J. F. S. uncritically says that "the Romans pushed into the New City and obtained a position *in* the Upper City opposite the Royal castle"; but Milman and Williams, with better judgment and more respect for Greek, state that "Cestius advanced *against* the Upper City." Thrupp, a good scholar, observes (Jerusalem, 191) that "Cestius encamped (evidently within Agrippa's Wall) *against* the Upper City opposite the palace," and again (199) "Cestius encamped on the north of the Upper City, opposite the Palace of Herod." If any one can produce a passage from Josephus in which *προς* must mean *into* and not merely *towards*, let him do so. Traill's translation (*supra*, 166), "proceeding *to* the Upper Town," being ambiguous, has easily been taken in a way prejudicial to Josephus, and misleading.

To extend the Upper City north of the first wall, of course, might seem to give some little support to Sir C. Wilson's theory that the Tyropœon ravine reached north of Wilson's arch towards (or up to) Antonia, but the help is very small indeed. Josephus says the Tyropœon ravine separated Acra from the Upper City; yet this extension of the Upper City would be separated from Antonia, not merely by his Tyropœon but also by the third hill placed as he proposes.

Little need be said by me about ἀμφίκυρτος, as no doubt the eastern hill is naturally *humped* (*Quarterly Statement*, 1886, p. 31) north of the Temple, as well as south of it. When Josephus says the western hill was *higher* and *straighter*, I see he speaks correctly of *section*, and so too of the eastern hill as *low* and *humped*. Sir C. Wilson takes him to speak both of *section* and *plan*. I have never seen it pointed out how the western hill is specially *straighter* on plan, and a single curve for ἀμφίκυρτος seems to me very unsatisfactory.

Sir C. Wilson would place En-rogel at the Virgin's Fount, already admitted to be Gihon in one passage. I cannot accept two or three Gihons, especially as he states there is only one known spring at Jerusalem. I said (*Quarterly Statement*, 1889, 45): "Joab's well seems undoubtedly to answer to the required position of En-rogel, but not to be actually En-rogel." Is any one prepared to say that if Joab's Well and Sir C. Warren's aqueduct were stopped, there would not be a stream of water next season bursting from the ground near Joab's Well, not to say anything of my Jebusite speculations? Josephus ("Wars" V, xii, 2) mentions a valley of the Fountain (πηγή), which I take to have been En-rogel, near Joab's Well. Curiously, this last spot (Bir Eyub) is in D.B., 944, said to be "in full view of the city, which the other spot (Virgin's Fount) is not." This latter rather seems to me to be under the very windows of the City of David, and therefore the last place near which to secrete spies (2 Sam. xvii, 17).

I regret wrongly taking Sir C. Wilson to apply *gai* and *emek* to the same part of Wady er Ralabeh. Still, if the western part of this Wady be the dale of the dead Ladies (Jeremiah xxxi, 40) and the lower part the

valley (*gāi*) of Hinnom, why is not that defiled but famous valley named in the description given on the way to the brook Kidron? I must reserve 3 for another time.

PAVING STONES OF THE TEMPLE.

By J. M. TENZ.

IN company with the Rev. J. E. Hanauer and the Rev. C. Biggs, Chaplain to the Bishop of Jerusalem, I visited the convent of "The Sisters of Zion," and saw a portion of the ancient street, lately discovered—it is about 5 or 6 feet below the level of the present street—also the two Stones of Proclamation and that portion of the Ecce Homo arch which once formed the smaller side entrance—probably of a Roman triumphal arch of later date—a part of which is now taken within the building of the convent. The rockscarp on the north side was also kindly pointed out to us by one of the Sisters of Zion, which is about 150 feet from the rock where once the "Tower of Antonia" stood, and formed a broad ditch to separate the tower from Bezetha, or new city. This ditch, also serving for a road, was paved with white stones, with slight cuttings or grooves across them, about 2 inches apart, for animals of burden to have a firm footing; but at some later date, when repaired, yellowish polished stones were put in many places to replace the missing ones, as now may be seen in the cellar of the convent, where they were discovered by digging for the foundation. These repairs were no doubt made after the destruction of Jerusalem and the Temple by the Romans, and the fine polished stones of the Temple court were used to adorn Adrian's city. Josephus and the Talmud state that the Temple courts were paved with stones of that description, also that in the taking of the Temple by the Romans a soldier fell down in the Temple court because the stones were so very smooth. It would be interesting to know if these fine polished stone slabs were from the pavement of the Temple courts. The broad ditch, beside serving for a roadway, may also have been used as a market place where sheep and oxen were sold for sacrifices, until at last it was extended to the outer court of the Temple, from which Jesus drove them.

The Stones of Proclamation were said to have served as a stand from which announcements were made of anything which had been lost or of something to be sold. These stones, when first found, were on the same level on the pavement, and may also have served the same purpose as the two stones on Mars Hill at Athens, where, when cases had to be tried, the accuser was placed on one stone and the accused on the other to state their grievances.

DISCOVERIES DURING THE CONSTRUCTION OF THE ACRE-DAMASCUS RAILWAY.

By G. SCHUMACHER, C.E.

A FEW discoveries made in a side cutting of the new railway works near the monument erected in memory of their inauguration, 1 kil. and 200 metres from the Haifa Station, may be noted.

An irregular-shaped depression in the rock ; its eastern end rounded, 5 feet across, and containing a round hole 1 foot 3 inches deep and 1 foot 11 inches in diameter. This portion is about 7 or 8 inches deep, and the western portion about 2 feet deep. The whole is carefully plastered, also the circular hole, and seems to represent a wine or olive press.

Adjacent to this is a square depression in the same soft sandstone rock measuring 5 feet by 3 feet 3 inches, apparently connected with the above-described basin by a canal 11 inches to 13 inches wide, partly plastered ; 40 feet eastwards a third rounded depression, 5 feet 6 inches by 2 feet 6 inches and 3 feet deep, with a canal running towards the last mentioned depression is found. This latter contains no signs of plastering. To the right is a circular basin, 3 feet 2 inches in diameter, 2 feet 6 inches deep, cut out of the rock, without plastering. Other square and round holes are traceable in the neighbourhood, in fact it seems as if one consecutive lot of basins of all shapes originally existed, all having the same object as wine presses and basins ; their surface was covered with a layer of soil 6 inches to 1 foot 6 inches thick.

Near Kil. 0 + 600 from Haifa, an old rock-cut destroyed water canal was struck.

HAIFA, *July*, 1893.

METEOROLOGICAL REPORT FROM JERUSALEM FOR YEAR 1883.

By JAMES GLAISHER, F.R.S.

THE numbers in column 1 of this table show the highest reading of the barometer in each month ; of these the highest appear in the winter, and the lowest in the summer months ; the maximum for the year is 27·613 inches, in December ; in 1882 the maximum was in January. In column 2 the lowest in each month is shown ; the minimum, 27·122 inches, occurred in both January and February ; in 1882 the minimum was in April. The range of readings in the year was 0·491 inch ; in 1882 it was 0·613 inch. The numbers in the 3rd column show the extreme range of readings in each month ; the smallest, 0·144 inch, is in June,

and the largest, 0.452 inch, is in February. The numbers in the 4th column show the mean monthly pressure of the atmosphere ; the highest, 27.490 inches, is in October, and the lowest, 27.282 inches, is in July ; in the year 1882 the largest was in January, and the smallest was in July. The mean pressure for the year was 27.384 inches ; at Saronā the mean pressure for the year was 29.818 inches.

The highest temperature of the air in each month is shown in column 5. The highest in the year was $98^{\circ}5$, on June 2nd, on which day the maximum temperature at Saronā was 80° ; the first day in the year the temperature reached 90° was on May 1st, and only on one other day in this month did the temperature reach 90° . In June there were 6 days when the temperature reached or exceeded 90° ; in July, on 7 days ; in August, on 10 days ; in September, on 7 days ; and in October, on 4 days. Therefore the temperature reached or exceeded 90° on 36 days in the year. At Saronā the temperature reached 90° as early as March 30th, and reached or exceeded 90° on only 16 days in the year ; the highest in the year at Saronā, viz. 106° , took place on September 30th ; on this day the maximum temperature at Jerusalem was $94^{\circ}5$.

The lowest temperature of the air in each month is shown in column 6. The lowest in the year was 31° , on March 1st ; the temperature was below 40° , in January, on 9 nights ; in February, on 10 nights ; in March, on 5 nights ; and in December on 5 nights. Therefore the temperature was below 40° on 29 nights in the year. The yearly range of temperature was $67^{\circ}5$. At Saronā the temperature was below 40° on only 2 nights ; the lowest in the year was 35° , on March 17th. The yearly range at Saronā was 71° .

The range of temperature in each month is shown in column 7, and these numbers vary from 23° in February, to 55° in March. At Saronā the range of temperature in each month varied from 25° in July, to 62° in March.

The mean of all the highest by day, of the lowest by night, and of the average daily ranges of temperature, are shown in columns 8, 9 and 10 respectively. Of the high day temperatures, the lowest, $51^{\circ}8$, is in January, and the highest, $87^{\circ}2$, is in August. At Saronā, of the high day temperatures, the lowest was $62^{\circ}8$ in February, and the highest, $88^{\circ}2$, in July. Of the low night temperatures, the coldest, $40^{\circ}2$, is in February, and the warmest, $65^{\circ}1$, is in August. At Saronā, of the low night temperatures, the coldest was $45^{\circ}6$ in February, and the warmest, $69^{\circ}4$, in August.

The average daily range of temperature, as shown in column 10, the smallest, $9^{\circ}3$, is in January, and the largest, $23^{\circ}4$, in May. At Saronā, of the average daily range, the smallest, $15^{\circ}7$, was in January, and the largest, $27^{\circ}7$, in September.

In column 11, the mean temperature of each month, as found from observations of the maximum and minimum thermometers only are shown : the month of the lowest temperature is February, $46^{\circ}1$, and the month of the highest, August, $76^{\circ}1$. The mean for the year is $62^{\circ}3$.

At Sarona, of the mean temperature of each month, the lowest is December, $51^{\circ}1$, and that of the highest, August, $78^{\circ}8$. The mean for the year at Sarona is $65^{\circ}7$.

The numbers in columns 12 and 13 are the monthly means of a dry and wet bulb thermometer, taken daily, at 9 a.m., and in column 14 the monthly temperature of the dew-point, or that of the temperature at which dew would have been deposited. The elastic force of vapour is shown in column 15, and in column 16 the water present in a cubic foot of air, in January and February, was as small as 3 grains, and in August as large as $5\frac{1}{2}$ grains. The numbers in column 18 show the degree of humidity, saturation being considered as 100, the smallest number in this column is, in September, 42, and the largest in January, 65. The weight of a cubic foot of air under its pressure, temperature, and humidity, at 9 a.m., is shown in column 19.

The most prevalent wind in January was S.W., and the least prevalent was N. In February the most prevalent was S.W., and the least were N., N.E., and S. In March the most prevalent was S.E., and the least prevalent was N.E. In April the most prevalent were W. and E., and the least were N. and N.E. In May the most prevalent was N.W., and the least was N.E. In June the most prevalent were N.W. and W., and the least were N.E., S., and S.W. In July the most prevalent was N.W., and the least were N. and its compounds. In August the most prevalent was N.W., and the least prevalent were E., E.E., and S. In September the most prevalent were N. and N.W., and the least were S. and S.W. In October the most prevalent was E., and the least prevalent was S.W. In November the most prevalent were E. and W., and the least were N., N.E., and S. In December the most prevalent was W., and the least prevalent were the N.E. and N.W. winds.

The most prevalent wind for the year was N.W., which occurred on 97 times, of which 23 were in July, and 17 in August, and the least prevalent wind for the year was N.E., which occurred on only 20 times. At Sarona the most prevalent wind for the year was S.W., which occurred on 76 times, and the least prevalent was E., which occurred on only 7 times in the year.

The numbers in column 28 show the mean amount of cloud in each month; the month with the smallest amount is September, and the largest, January. Of the cumulus, or fine weather cloud, there were 65 instances in the year; of these, 16 were in August, and 11 in both June and July, and none in either January or December. Of the nimbus, or rain cloud, there were 46 instances in the year, of which 13 were in January and 7 in both March and November, and only 8 instances from April to October. Of the cirrus there were 5 instances; of the stratus, 8 instances; of the cirro stratus, 40 instances; of the cumulus stratus, 46 instances; of the cirro cumulus, 41 instances; and there were 111 instances of cloudless skies, of which 20 were in September, 18 in June, and 17 in July, and 3 only in each of the months of January, February

and December. At Sarona there were 84 instances of cloudless skies, of which 14 were in June, 13 in May, and 11 in March.

The largest fall of rain for the month in the year was in January, 10·93 inches, of which 1·62 inch fell on the 3rd, 1·52 inch on the 17th, and 1·30 inch on the 23rd. The next largest fall for the month was 7·59 inches in November, of which 3·15 inches fell on the 4th, and 1·55 inch on the 3rd, and the next in order was 5·74 inches in March, of which 3·20 inches fell on the 2nd. No rain fell from April 25th till October 11th, making a period of 168 consecutive days without rain. The total fall of rain for the year was 31·92 inches, which fell on 70 days during the year. At Sarona the largest fall for the month in the year was 11·32 inches in January, and the next in order was 8·14 inches in November. No rain fell from April 25th till October 10th, making a period of 167 consecutive days without rain. The total fall of rain for the year at Sarona was 30·96 inches, which fell on 71 days during the year.

(To face p. 334.)

level of the Mediterranean Sea, open on all sides.

	Direction of wind. Relative proportion of.								Mean amount of cloud.	Rain.	
	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.		Number of days on which it fell.	Amount collected.
											in.
1900	0	3	1	1	1	15	6	4	7.2	19	10.93
1901	2	3	3	2	2	8	4	4	6.2	13	3.79
1902	2	1	2	10	5	4	5	2	5.8	9	5.74
1855	1	1	6	4	3	3	7	5	4.8	3	0.35
1778	2	0	4	7	1	1	4	12	2.9	0	0.00
1770	5	0	1	2	0	0	10	12	1.3	0	0.00
1668	0	0	0	0	1	2	5	23	1.9	0	0.00
1669	5	1	0	0	0	1	7	17	2.9	0	0.00
1770	8	3	3	2	0	0	3	11	0.8	0	0.00
1778	6	4	8	2	2	1	5	3	4.0	3	0.31
1900	0	3	10	1	1	5	7	3	3.0	11	7.59
1908	3	1	4	5	5	4	8	1	5.9	12	3.21
1823	sum. 34	sum. 20	sum. 42	sum. 36	sum. 21	sum. 44	sum. 71	sum. 97	3.9	sum. 70	sum. 31.92
190	20	21	22	23	24	25	26	27	28	29	30

(To face p. 334.)

MONTHLY METEOROLOGICAL TABLE

Deduced from observations taken at Jerusalem, by Joseph Gamel, in a garden within the city, about 2,500 feet above the level of the Mediterranean Sea, open on all sides.
Latitude, 31° 46' 40'' N., Longitude, 35° 13' 30'' E.

Month.	Pressure of atmosphere in month.				Temperature of the air in month, at 9 a.m.								Mean readings.			Vapour.			Degree of humidity.	Weight of a cubic foot of air.	Direction of wind. Relative proportion of.								Mean amount of cloud.	Rain.	
	Highest.	Lowest.	Range.	Mean.	Highest.	Lowest.	Range.	Mean of all highest.	Mean of all lowest.	Mean daily range.	Mean.	Dry bulb.	Wet bulb.	Dew point.	Elastic force of vapour.	Weight of vapour in a cubic foot of air.	Additional weight required for saturation.	N.			N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Number of days on which it fell.		Amount collected.	
Year.	in.	in.	in.	in.	°	°	°	°	°	°	°	°	°	°	grs.	grs.	grs.	°	grs.										in.		
January ...	27·412	27·122	0·420	27·366	60·5	36·5	24·0	51·8	42·5	9·3	47·2	47·8	45·5	43·0	·277	3·1	0·6	55	400	0	3	1	1	1	15	6	4	7·2	19	10·36	
February ...	27·371	27·122	0·412	27·419	63·5	35·5	28·0	52·0	40·2	11·8	46·1	47·5	44·7	41·6	·284	3·0	0·7	51	401	2	3	3	2	2	8	4	4	0·2	12	3·79	
March ...	27·329	27·104	0·411	27·433	66·0	31·0	35·0	60·5	46·2	17·3	54·0	50·1	46·5	43·8	·288	3·2	1·8	62	402	2	1	2	10	5	4	5	2	5·8	9	5·74	
April ...	27·327	27·172	0·365	27·389	68·0	40·0	28·0	68·0	49·8	19·1	59·6	52·2	50·8	45·7	·303	3·5	2·3	65	405	1	1	6	4	3	3	7	5	4·8	3	0·26	
May ...	27·447	27·198	0·289	27·354	68·5	47·5	21·0	78·4	58·0	20·4	66·7	49·7	49·4	41·4	·360	4·1	3·3	62	405	2	0	4	7	1	1	4	12	2·9	0	0·00	
June ...	27·468	27·250	0·144	27·321	68·5	56·5	12·0	85·0	61·8	23·2	78·4	77·7	64·2	54·8	·430	4·6	5·0	46	409	5	0	1	2	6	0	10	12	1·3	0	0·00	
July ...	27·346	27·189	0·147	27·262	66·5	58·0	8·5	68·5	64·8	31·2	74·0	78·7	65·0	65·0	·442	4·7	5·5	45	401	0	0	0	0	1	2	6	28	1·5	0	0·00	
August ...	27·480	27·260	0·140	27·314	68·0	60·5	7·5	67·2	66·1	22·1	76·1	78·3	66·7	68·7	·496	5·4	6·0	31	409	5	1	6	0	0	1	7	17	2·9	0	0·00	
September ...	27·533	27·288	0·297	27·413	65·5	59·5	6·0	66·8	63·2	33·1	74·8	78·5	64·0	64·0	·418	4·4	6·5	42	470	8	3	3	2	0	0	3	11	0·8	0	0·00	
October ...	27·530	27·370	0·160	27·499	66·5	64·5	2·0	79·7	69·2	19·5	67·0	71·2	61·3	58·3	·409	4·4	4·1	31	470	6	4	3	2	2	1	5	3	4·0	3	0·31	
November ...	27·613	27·294	0·875	27·442	66·0	63·0	3·0	86·0	43·1	14·9	49·1	49·7	44·1	44·1	·278	3·2	0·9	77	488	5	1	4	3	5	4	3	1	5·9	12	3·21	
Means ...	27·511	27·215	0·296	27·381	63·5	46·7	36·8	71·4	53·6	17·8	62·3	63·1	56·2	48·7	·362	4·0	3·2	60	483	sum. 34	sum. 20	sum. 42	sum. 36	sum. 21	sum. 44	sum. 71	sum. 97	4·9	sum. 70	sum. 31·92	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	

